86-4318

Hydrogeologic Correlations for Selected Wells on Long Island, New York--

A data base with retrieval program

U.S. GEOLOGICAL SURVEY
Water-Resources Investigations
Report 86-4318

Prepared in cooperation with the

NASSAU COUNTY DEPARTMENT OF PUBLIC WORKS
SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
SUFFOLK COUNTY WATER AUTHORITY
NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION

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by H. T. Buxton, D. A. Smolensky, and P. K. Shernoff

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Syosset, New York

1989

DEPARTMENT OF THE INTERIOR

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(in pocket)

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CONVERSION FACTORS AND ABBREVIATIONS

For the convenience of readers who prefer metric (International System) units to the inch-pound units in this report, the following conversion factors may be used:

Multiply inch-pound units	by	To obtain metric units
	Length	
inch (in)	25.40	millimeter (mm)
foot (ft)	0.3048	meter (m)
mile (mi)	1.609	kilometer (km)
	Flow	
gallon per minute (gal/min)	0.06308	liter per second (L/s)

National Geodetic Vertical Datum of 1929 (NGVD of 1929)

A geodetic datum derived from a general adjustment of the first-order level nets of both the United States and Canada, formerly called "mean sea level."

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ABSTRACT

Accurate delineation of Long Island's internal hydrogeologic structure is integral to the understanding and management of the ground-water system. The irregular extent and surface configuration of Long Island's seven major hydrogeologic units give the ground-water system a complex internal structure. This report presents a computerized data base of hydrogeologic correlations for 3,146 wells on Long Island and adjacent parts of New York City. The data base includes the well-identification number, the latitude and longitude of the well location, the altitude of land surface at the well, the altitude of the bottom of the drilled hole, and the altitude of the upper surface of the major hydrogeologic units penetrated by the well. A computer program is included that allows retrievals of selected types of data for all or any local area of Long Island. These data retrievals are a valuable aid to the construction of hydrogeologic-surface maps.

INTRODUCTION

Long Island extends approximately 120 mi eastward from the East River and New York Harbor to Montauk Point (fig. 1). It contains the densely populated boroughs of New York City (Kings and Queens Counties) in the west, suburban Nassau and western Suffolk Counties in the central part, and areas of farmlands and pine barrens in the east.

Ground water is the sole source of freshwater supply for the 2.6 million inhabitants of Nassau and Suffolk Counties. About 500 Mgal/d was pumped from the Island's ground-water reservoir in 1981 for public supply, commercial, and agricultural needs. This demand is expected to increase in coming years, which will make proper resource management imperative.

Long Island's geologic history has consisted of alternating periods of erosion and deposition. The result is a sequence of aquifers and confining units of irregular extent and surface configuration that give the ground-water system a complex internal structure. This irregular internal geometry has a large influence on the patterns and rates of ground-water flow. Ground-water flow is retarded where the aquifers are separated by a confining unit but is unimpeded where the intervening confining unit has been eroded or where cut-and-fill deposition makes two aquifers laterally contiguous.

Knowledge of the internal hydrogeologic structure is necessary for efficient resource management, which includes (1) designing future water-development plans; (2) selecting sites for waste disposal; (3) locating and tracking the movement of contaminants within the ground-water system; and (4) mitigating other undesirable effects of man's influence on the system, such as streamflow depletion and saltwater intrusion.

Purpose and Scope

This report presents a computerized data base of hydrogeologic-unit correlations for 3,146 wells on Long Island and adjacent parts of New York City. The data base (at end of report) gives the altitude at which the upper surface of each of seven major hydrogeologic units was penetrated and also includes the location, land-surface altitude, and depth of each well.

The following sections discuss the hydrogeologic units and the well data used to correlate surface altitudes for each unit; they also describe the format of the data base and explain each element. Also included is a description of a simple system of data retrieval that facilitates construction of hydrogeologic maps with a computer program.

A report by Smolensky and others (in press) presents a set of maps showing the configuration of the upper surface of these hydrogeologic units. The correlations presented herein were developed during construction of those maps and are consistent with their representation of the system geometry. The data-retrieval methods described in this report were used during map construction.

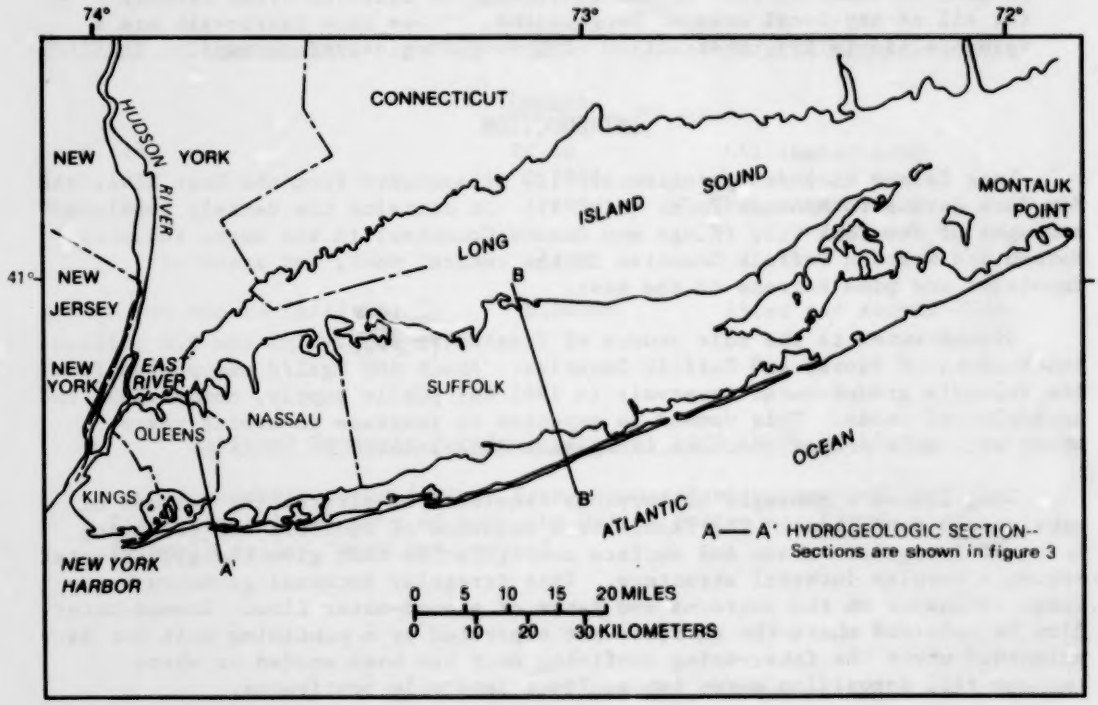


Figure 1.--Location of Long Island, N.Y., and of hydrogeologic sections depicted in figure 3.

Previous Investigations

Some previous hydrogeologic investigations that were completed on a local scale were used as a starting point for this study. Krulikas (1981) and Jensen and Soren (1971) evaluated the hydrogeology of Suffolk County, Kilburn (1980) and Kilburn and Krulikas (1986) evaluated the hydrogeology of parts of Nassau County, and Buxton and others (1981) evaluated the hydrogeology of Kings and Queens Counties.

Acknowledgments

The authors greatly appreciate support provided by the New York State Department of Environmental Conservation, Nassau County Department of Public Works, Suffolk County Department of Health Services, Suffolk County Water Authority, and New York City Department of Environmental Protection.

HYDROGEOLOGIC FRAMEWORK

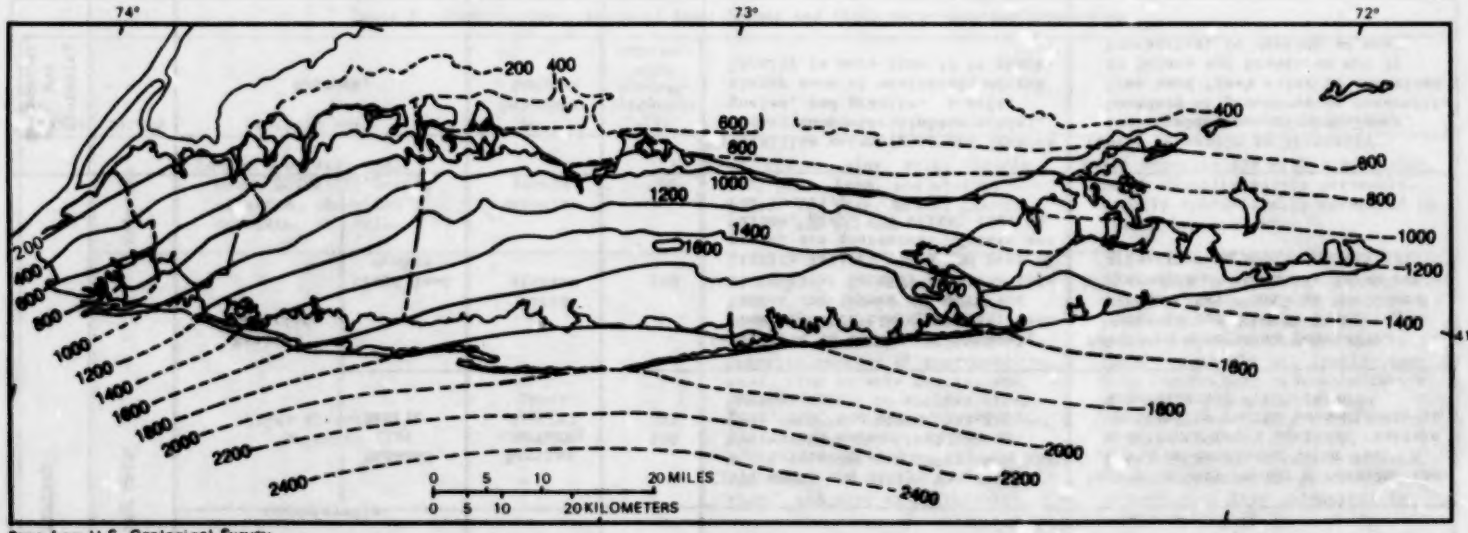
Long Island is underlain by unconsolidated deposits of clay, silt, sand, and gravel that overlie southward-dipping consolidated bedrock (fig. 2). The unconsolidated deposits are thinnest in northern Queens County (northwestern Long Island) and thicken to the south and east to a maximum thickness of 2,000 ft at the south shore. These deposits contain several distinct geologic units ranging in age from Late Cretaceous through Pleistocene, with some recent deposits near shores and along streams. These units are differentiated by age, method of deposition, and lithology in table 1.

In studies of ground-water availability and flow patterns, correlations that are based strictly on geologic factors may not adequately describe the internal structure of the hydrologic system; generally an interpretation in which the units are differentiated on the basis of water-transmitting properties is more useful. Thus, table 1 gives both the geologic units and the corresponding hydrogeologic units and shows their stratigraphic relationships. Eight major hydrogeologic units are indicated; these are, in order of deposition, consolidated bedrock, the Lloyd aquifer, the Raritan confining unit, the Magothy aquifer, the Monmouth greensand, the Jameco aquifer, the Gardiners Clay, and the upper glacial aquifer. The two hydrogeologic vertical sections shown in figure 3 depict the relative position of these units in western and eastern Long Island, respectively. The Jameco aquifer is present only in western Long Island (fig. 3A), and the Monmouth greensand is present only in eastern Long Island (fig. 3B). A map showing the extent and configuration of all units below the upper glacial aquifer is given in Smolensky and others (in press). Other local hydrogeologic units have been identified within the upper glacial deposits but are not discussed herein.

Table 1.--Hydrogeologic units of Long Island and their water-bearing properties.

System	Series	Geologic unit	Hydrogeologic unit	Approximate maximum thickness (ft)	Character of deposits	Water-bearing properties
Quaternary	Holocene	Recent deposits: Salt marsh deposits, stream alluvium, shoreline deposits, and fill.	Recent deposits	50	Sand, gravel, clay, silt, organic mud, peat, loam, and shells. Colors are gray, brown, green, black, and yellow.	Beach deposits are highly permeable; marsh deposits poorly permeable. Locally hydraulically connected to underlying aquifers.
	Pleistocene	Upper Pleistocene deposits	Upper glacial aquifer	700	Till composed of clay, sand, gravel, and boulders, forms Harbor Hill and Ronkonkoma terminal moraines. Outwash deposits consist of quartzose sand, fine to very coarse, and gravel, pebble to boulder sized. Also contains lacustrine, marine, and reworked deposits. Local units are Port Washington aquifer and confining unit, "20-foot clay," and clay at Smithtown.	Till is poorly permeable. Outwash deposits are moderately to highly permeable. Glaciolacustrine and marine clay deposits are mostly poorly permeable but locally have thin, moderately permeable layers of sand and gravel. Average horizontal hydraulic conductivity is approximately 270 ft/d; conductivity of morainal material is approximately 50 percent of outwash deposits; anisotropy is approximately 10:1.
		----unconformity?----				
		Gardiners Clay	Gardiners Clay	150	Clay, silt, and few layers of sand. Colors are grayish green and brown. Contains marine shells and glauconite.	Poorly permeable; constitutes a confining layer for underlying aquifer. Some sand lenses may be permeable. Average vertical hydraulic conductivity is approximately 0.001 ft/d.
		----unconformity?----				
		Jameco Gravel	Jameco aquifer	200	Sand, fine to very coarse, and gravel to large-pebble size; few layers of clay and silt. Gravel is composed of crystalline and sedimentary rocks. Color is mostly brown.	Moderately to highly permeable. Confined by overlying Gardiners Clay. Average horizontal hydraulic conductivity is 200 to 300 ft/d; anisotropy is approximately 10:1.
		----unconformity----				

Cretaceous	Upper Cretaceous	unconformity Monmouth Group		Monmouth Greensand	200	Interbedded marine deposits of clay, silt, and sand, dark-greenish gray, greenish-black, greenish, dark-gray, and black, containing much glauconite.	Poorly permeable; primarily a confining unit for underlying Magothy aquifer. Average vertical hydraulic conductivity is approximately 0.001 ft/d.
		unconformity Matawan Group–Magothy Formation, undifferentiated		Magothy aquifer	1,100	Sand, fine to medium, clayey in part; interbedded with lenses and layers of coarse sand and sandy and solid clay. Gravel is common in basal zone. Sand and gravel are quartzose. Lignite, pyrite, and iron oxide concretions are common. Colors are gray, white, red, brown, and yellow.	Most layers are poorly to moderately permeable; some are highly permeable locally. Water is unconfined in uppermost parts, elsewhere is confined. Constitutes principal aquifer for public supply. Average horizontal hydraulic conductivity is 50 ft/d; anisotropy is approximately 100:1.
		unconformity Raritan Formation	Unnamed clay member	Raritan confining unit	200	Clay, solid and silty; few lenses and layers of sand. Lignite and pyrite are common. Colors are gray, red, and white, commonly variegated.	Poorly to very poorly permeable; constitutes confining layer for underlying Lloyd aquifer. Average vertical hydraulic conductivity is approximately 0.001 ft/d.
			Lloyd Sand Member	Lloyd aquifer	500	Sand, fine to coarse, and gravel, commonly with clayey matrix; some lenses and layers of solid and silty clay; locally contains thin lignite layers. Sand and most of gravel are quartzose. Colors are yellow, gray, and white; clay is red locally.	Poorly to moderately permeable. Water is confined by overlying Raritan clay. Average horizontal hydraulic conductivity is 40 ft/d; anisotropy is approximately 10:1.
Precambrian and Paleozoic	- - -	unconformity Bedrock		Bedrock	- -	Crystalline metamorphic and igneous rocks; muscovite-biotite schist, gneiss, and granite. A soft, clayey zone of weathered bedrock locally is more than 70 ft thick.	Poorly permeable to virtually impermeable; constitutes lower boundary of ground-water reservoir. Some hard fresh water is contained in joints and fractures but is impractical to develop at most places.



Base from U.S. Geological Survey
State base map, 1:500,000, 1974

EXPLANATION

1800 — — — LINE OF EQUAL THICKNESS OF UNCONSOLIDATED DEPOSITS—Dashed where approximately located. Contour interval 200 feet

Figure 8.--Thickness of unconsolidated deposits on Long Island.

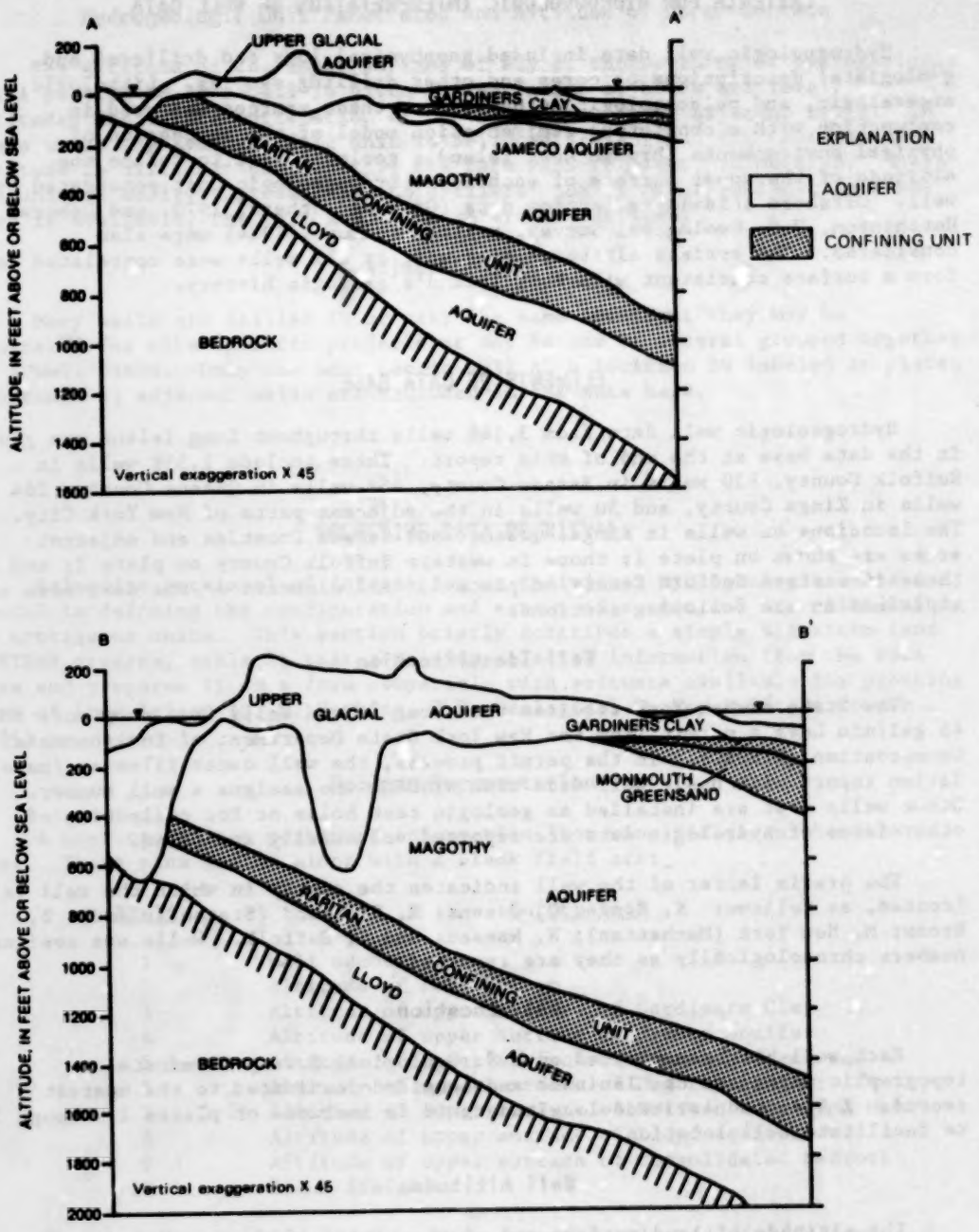


Figure 3.--Generalized vertical sections showing major hydrogeologic units: A. On western Long Island. B. On eastern Long Island. (Locations are shown in fig. 1.)

CRITERIA FOR HYDROGEOLOGIC INTERPRETATION OF WELL DATA

Hydrogeologic well data included geophysical logs and drillers' and geologists' descriptions of cores and other drilling samples. Lithologic, mineralogic, and paleontologic evidence from these sources was used in conjunction with a conceptual sedimentation model of the succession of physical environments through Long Island's geologic past to define the altitude of the upper surface of each major hydrogeologic unit penetrated by a well. Offshore seismic-reflection data (Grim and others, 1970, and Deborah Hutchinson, U.S. Geological Survey, written commun., 1984) were also considered. The surface altitudes of a unit at all wells were correlated to form a surface consistent with Long Island's geologic history.

ELEMENTS OF DATA BASE

Hydrogeologic well data from 3,146 wells throughout Long Island are given in the data base at the end of this report. These include 1,559 wells in Suffolk County, 830 wells in Nassau County, 462 wells in Queens County, 264 wells in Kings County, and 30 wells in the adjacent parts of New York City. The locations of wells in Kings, Queens, and Nassau Counties and adjacent areas are shown on plate 1; those in western Suffolk County on plate 2; and those in eastern Suffolk County on plate 3. All elements of the data base are explained in the following sections.

Well Identification

The State of New York requires that Long Island wells that pump more than 45 gal/min have a permit from the New York State Department of Environmental Conservation (NYSDEC). In the permit process, the well owner files an installation report with basic well data with NYSDEC, who assigns a well number. Other wells that are installed as geologic test holes or for collection of other forms of hydrologic data are reported voluntarily and filed.

The prefix letter of the well indicates the county in which the well is located, as follows: K, Kings; Q, Queens; R, Richmond (Staten Island); B, Bronx; M, New York (Manhattan); N, Nassau; and S, Suffolk. Wells are assigned numbers chronologically as they are reported.

Well Location

Each well has been plotted on U.S. Geological Survey 24-minute topographic maps, and the latitude and longitude estimated to the nearest second. A 5-second latitude-longitude grid is included on plates 1 through 3 to facilitate well location.

Well Altitudes

The altitude of land surface and of the bottom of the borehole is given in feet above or below (-) sea level. Many boreholes are significantly deeper than the completed well, and commonly the hydrogeologic information from the backfilled part of the hole is of value in that it indicates the presence or absence of a hydrogeologic unit at that depth.

Hydrogeologic Unit Penetrated and Altitude of Upper Surface

The altitude of the upper surface of any of the seven major hydrogeologic units penetrated by a well is given in feet above or below sea level. Altitudes facilitate correlation of these horizons among adjacent wells. In areas where the hydrogeologic unit is believed present but its exact surface altitude is difficult to identify, the term PRES (present) is entered. Where the unit is believed present but no drillers' log or other geologic information is available, the term NOREC (no record) is entered.

Adjacent Wells

Many wells are drilled in or near the same location; they may be clustered for site-specific projects or may be one of several grouped together in a well field. Only the most recent well at a location is labeled on plates 1 through 3; adjacent wells are included in the data base.

SELECTIVE DATA RETRIEVAL

Selective retrieval of information on individual hydrogeologic units is useful in defining the configuration and extent of a unit and its relationship to contiguous units. This section briefly describes a simple algorithm (and FORTRAN program, table 2) that retrieves selected information from the data base and prepares it in a form compatible with software available for plotting maps of Long Island (G. W. Hawkins, U.S. Geological Survey, written commun., 1984).

Program Documentation

A user can select pertinent information from nine fields in the data base. These nine fields along with a blank field are:

Field	Information
1	Well number
2	Altitude of hole bottom
3	Altitude of upper surface of Gardiners Clay
4	Altitude of upper surface of Jameco aquifer
5	Altitude of upper surface of Monmouth Greensand
6	Altitude of upper surface of Magothy aquifer
7	Altitude of upper surface of Raritan confining unit
8	Altitude of upper surface of Lloyd aquifer
9	Altitude of upper surface of consolidated bedrock
10	Blank field

The algorithm retrieves information from the selected field(s) and creates a file of labels. The file includes the latitude and longitude of the well for location, the symbol used for plotting the well on a map of Long Island, and the desired label to be plotted at each symbol (labels are selected from the above fields).

Table 2.--FORTRAN computer program for selective re

```
      CHARACTER*6 NF(10),NA,NB,NC,NL
      CHARACTER*1 NS,TEXTIN,NN
      PRINT*,'*****************************************************'
      PRINT*,'***  PROGRAM - HYDROGEOLOGY RETRIEVE(HGR.F77)  ***'
      PRINT*,'***  GENERATES A LABEL FILE (FOR MLIPLOT)      ***'
      PRINT*,'***  FROM THE HYDROGEOLOGY DATA BASE.          ***'
      PRINT*,'*****************************************************'
      PRINT*,'***ENTER NAME OF HYDROGEOLOGY FILE'
      CALL IFILE(15)
      PRINT*,'***ENTER NAME OF LABEL CARDS FILE'
      CALL OFILE(4,16)
C
      PRINT*,'*****************************************************'
      NCHOP=INTIN(' ***ENTER 0 FOR ISLAND-WIDE RETRIEVAL, 1 FOR LOCAL')
      IF(NCHOP.EQ.0) GO TO 20
      LNLAT=INTIN(' ***ENTER LAT OF NORTHERN EXTENT OF LOCAL AREA***')
      LSLAT=INTIN(' ***ENTER LAT OF SOUTHERN EXTENT OF LOCAL AREA***')
      LELONG=INTIN(' ***ENTER LONG OF EASTERN EXTENT OF LOCAL AREA***')
      LWLONG=INTIN(' ***ENTER LONG OF WESTERN EXTENT OF LOCAL AREA***')
   20 CONTINUE
C
      PRINT*,'*****************************************************'
      PRINT*,'***  THE DATA BASE HAS THE FOLLOWING           ***'
      PRINT*,'***  INFORMATION IN THE NOTED NUMBERED FIELDS. ***'
      PRINT*,'*****************************************************'
      PRINT*,'*** - 1- WELL NUMBERS                          ***'
      PRINT*,'*** - 2- ALTITUDE OF HOLE BOTTOM               ***'
      PRINT*,'*** - 3- ALT. OF GARDINERS CLAY                ***'
      PRINT*,'*** - 4- ALT. OF JAMECO GRAVEL                 ***'
      PRINT*,'*** - 5- ALT. OF MONMOUTH GREENSAND            ***'
      PRINT*,'*** - 6- ALT. OF MAGOTHY AQUIFER               ***'
      PRINT*,'*** - 7- ALT. OF RARITAN CONFINING UNIT        ***'
      PRINT*,'*** - 8- ALT. OF LLOYD AQUIFER                 ***'
      PRINT*,'*** - 9- ALT. OF BEDROCK                       ***'
      PRINT*,'*** -10- BLANK FIELD(NO LABEL IN OPTIONS)      ***'
      PRINT*,'*****************************************************'
      NN=TEXTIN('ENTER C TO CONTINUE')
      PRINT*,'*****************************************************'
      PRINT*,'***     THREE OPTIONS ARE AVAILABLE            ***'
      PRINT*,'***     --------------------------             ***'
      PRINT*,'***  1- LABEL WITH FIELD A IF:                 ***'
      PRINT*,'***                FIELD B IS NOT BLANK.       ***'
      PRINT*,'***  2- LABEL WITH FIELD A IF:                 ***'
      PRINT*,'***                FIELD B IS BLANK            ***'
      PRINT*,'***  3- LABEL WITH FIELD A IF:                 ***'
      PRINT*,'***                FIELD B IS BLANK, AND       ***'
      PRINT*,'***                FIELD C IS NOT BLANK.       ***'
      NN=TEXTIN('ENTER C TO CONTINUE')
      PRINT*,'*****************************************************'
      PRINT*,'*** '
      NOP=INTIN(' ***     ENTER OPTION( 1,2 OR 3)***')
```

```
      PRINT*,'*** '
      NS=TEXTIN(' ***ENTER SYMBOL FOR WELL POINT ***')
      PRINT*,'*** '
C
       NF(10)='      '
      IA=INTIN(' ***ENTER FIELD FOR A ***')
      IB=INTIN(' ***ENTER FIELD FOR B ***')
       IF(NOP.NE.3) GO TO  15
      IC=INTIN(' ***ENTER FIELD FOR C ***')
C
  15  PRINT*,'*************************************************'
      PRINT*,'***   YOU HAVE THE OPTION TO HAVE THE INFO IN  ***'
      PRINT*,'***   ONE OF THE FIELDS ADDED TO THE END OF    ***'
      PRINT*,'***   THE LABEL CARDS FOR REFERENCE.           ***'
      IL=INTIN(' ***      ENTER FIELD # FOR EXTRA LABEL***')
C
C  READ DATA FOR A WELL
C
  10  READ(15,8,END=99)NF(1),LAT,LONG,(NF(I),I=2,9)
    8 FORMAT(A6,3X,I6,1X,I6,7X,A6,3X,A6,1X,A6,
     /    1X,A6,1X,A6,1X,A6,1X,A6,1X,A6)
C
      IF(NCHOP.EQ.0)GO TO 25
      IF(LAT.GT.LNLAT.OR.LAT.LT.LSLAT) GO TO 10
      IF(LONG.GT.LWLONG.OR.LONG.LT.LELONG) GO TO 10
   25 CONTINUE
C
C   DEFINE FIELDS A,B,C AND L
C
      NA=NF(IA)
      NB=NF(IB)
      IF(NOP.NE.3) GO TO 140
      NC=NF(IC)
C
  140 CONTINUE
      NL=NF(IL)
C
      GO TO (50,60,70),NOP
   50 IF(NB.NE.'      ') GO TO 5
      GO TO 10
   60 IF(NB.EQ.'      ') GO TO 5
      GO TO 10
   70 IF(NB.EQ.'      '.AND.NC.NE.'      ') GO TO 5
      GO TO 10
C
    5 WRITE(16,9)NS,LAT,LONG,NA,NL
    9 FORMAT('L   0    ',A1,20X,I6,1X,I6,4X,A6,30X,A6)
      GO TO 10
   99 CONTINUE
      STOP
      END
```

One of three options can be selected:

(1) Label with field A if field B is not blank,
(2) Label with field A if field B is blank,
(3) Label with field A if field B is blank, and field C is not blank,

where A, B, and C are defined to be one of the ten fields listed on page 9. Data can be retrieved on an islandwide scale or for a local area by defining limiting latitudes and longitudes.

Sample Retrievals

The options provided by this program enable the user to retrieve selected data and plot maps that are useful in defining hydrogeologic geometry, either on an islandwide or a local scale. Several examples of data retrievals are outlined below; an application to construct a hydrogeologic surface map is presented also.

Example 1.--Select option 1; designate field A equal to 1 (well number) and field B equal to 6 (altitude of the upper surface of the Magothy aquifer).

A file is prepared for use in plotting a map that shows the locations and well numbers of all wells that penetrate the Magothy aquifer. (If field A were designated equal to 6, the map would show the surface altitude of the Magothy aquifer at each well).

Example 2.--Select option 3; designate field A equal to 10, field B equal to 3, and field C equal to 6.

A file is prepared for use in plotting a map that identifies by a symbol each well that does not penetrate the Gardiners Clay but contacts the underlying Magothy aquifer. This indicates that the Gardiners Clay is absent at this site and provides a guide to defining the extent of that unit.

Example 3.--Select option 3; designate field A equal to 2, field B equal to 7, and field C equal to 6.

A file is prepared for use in plotting a map that shows the altitude of the bottom of all wells that penetrate the Magothy aquifer but not the underlying Raritan confining unit. The surface of the confining unit must be below this altitude.

An example of a hydrogeologic-unit map constructed with this data-retrieval system is shown in figure 4 (p. 14). This map shows the upper-surface configuration of the Raritan confining unit. All data on the map were retrieved from the data base through the discussed algorithm and are as follows:

-- Upper surface altitude of the Raritan confining unit in wells where it is overlain by the Magothy aquifer, in feet. These values indicate the altitude of the unconformity between these units, a relatively flat surface.

-- Upper surface altitude of the Raritan confining unit in wells where the Magothy aquifer is absent. These values indicate the altitude of the Cretaceous surface where it has experienced severe post-Cretaceous erosion, especially during the Pleistocene.

-- Bottom altitude of wells that penetrate the Magothy aquifer but not the Raritan confining unit. These values indicate the highest possible surface altitude of the Raritan confining unit and are used to guide contours where wells are not deep enough to penetrate the unit.

-- Locations of wells that do not penetrate the Raritan confining unit but do contact older and stratigraphically deeper hydrogeologic units (the Lloyd aquifer or unconsolidated bedrock), indicating that the Raritan confining unit is absent at this location.

When combined, these data are a valuable aid to defining the surface configuration of a hydrogeologic unit; they also facilitate definition of the extent of a hydrogeologic unit and differentiation of the parts of the surface that were shaped by differing geologic events or environments. Use of this data-retrieval method is most advantageous in areas where typically layered strata have been affected by severe erosion.

SUMMARY

The hydrogeologic data base and method of selective retrieval presented in this report offer a method to obtain hydrogeologic data for any local area on Long Island and provide the data in a format suitable for construction of hydrogeologic maps. The data represent the upper surface altitudes of the hydrogeologic units penetrated in 3,146 wells on Long Island and surrounding parts of New York City. The surface altitude of each hydrogeologic unit at a well was inferred through inspection of lithologic, mineralogic, paleontologic, and geophysical data collected from the well and by correlation of surface altitudes in nearby wells. The resulting series of correlated surface altitudes were used to define the surface configuration of the hydrogeologic units on a set of maps by Smolensky and others (in press).

As additional hydrogeologic data become available, reevaluation of correlations with nearby wells and concurrent adjustment of the data would be advisable so that the data base will accurately represent the hydrogeologic structure of Long Island's ground-water reservoir.

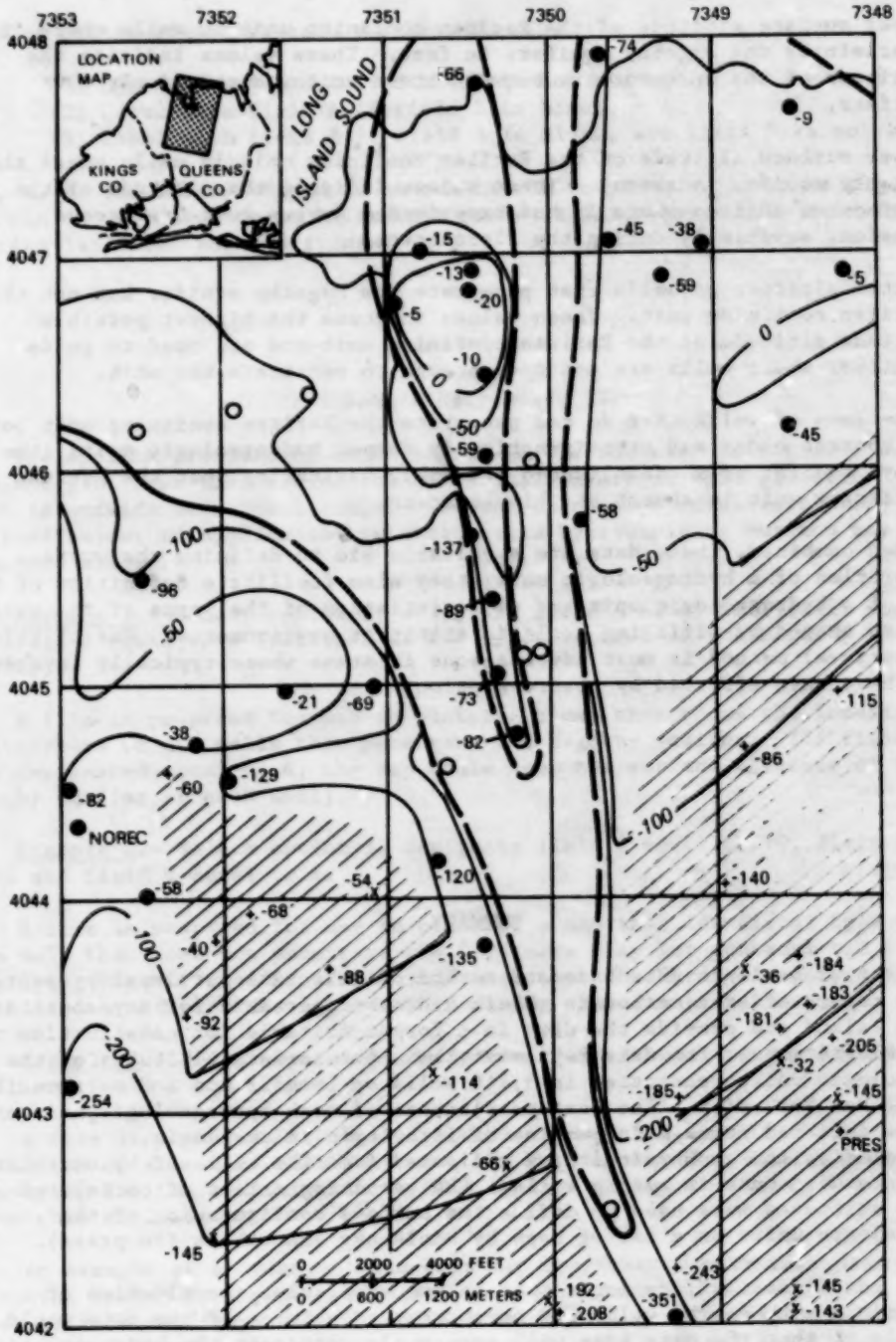


Figure 4.--Selected hydrogeologic data and estimated configuration of the upper surface of the Raritan confining unit in northern Queens County.

EXPLANATION TO FIGURE 4

+-60 UPPER SURFACE ALTITUDE OF RARITAN CONFINING UNIT--where Magothy aquifer is overlying, in feet below NGVD of 1929.

●-38 UPPER SURFACE ALTITUDE OF RARITAN CONFINING UNIT--where Magothy aquifer was eroded away, in feet below NGVD of 1929.

×-114 ALTITUDE OF BOTTOM OF WELL THAT CONTACTS MAGOTHY AQUIFER BUT NOT RARITAN CONFINING UNIT--in feet below NGVD of 1929.

○ WELL THAT DOES NOT CONTACT RARITAN CONFINING UNIT BUT DOES CONTACT AN UNDERLYING UNIT.

+PRES UNIT IS BELIEVED PRESENT BUT ITS SURFACE ALTITUDE IS UNDEFINED AT THIS WELL.

●NOREC NO BOREHOLE INFORMATION IS AVAILABLE IN THE INTERVAL WHERE THIS UNIT IS BELIEVED PRESENT.

——— EXTENT OF RARITAN CONFINING UNIT.

——-50—— LINE OF EQUAL UPPER SURFACE ALTITUDE--contour interval 50 and 100 feet. Datum is NGVD of 1929.

▨ AREA WHERE RARITAN CONFINING UNIT IS UNCONFORMABLY OVERLAIN BY MAGOTHY AQUIFER.

4044, 7351 DEGREES AND MINUTES OF LATITUDE AND LONGITUDE, RESPECTIVELY.

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DATA BASE

Upper Surface Altitudes of Major Hydrogeologic Units at 3,146 Wells on Long Island, New York

(Locations are shown on plates 1, 2, 3)

NOTES

Well identification

Prefix letter (column 1) indicates county in which well is located:

K = Kings
Q = Queens
S = Suffolk
R = Richmond (Staten Island)
B = Bronx
M = New York (Manhattan)
N = Nassau

Hydrogeologic unit penetrated

The term PRES (present) is entered for wells where the hydrogeologic unit is believed present but its surface altitude is difficult to identify. Where the unit is believed present but no drillers' log or other geologic information is available, the term NOREC (no record) is entered.

Other abbreviations

Mon. greensand = Monmouth greensand
Rarit. conf. unit = Raritan confining unit

Remarks

Veatch 65 - indicates well number used in Veatch (1906).
NR -10 to -30 - indicates no hydrogeologic records are available from 10 to 30 feet below sea level.

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENT-ICATIO NUMBER		LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL							LOCATED NEAR WELL	REMARKS
			TOP	BOTTOM	GARD-INERS CLAY	JAMECO GRAVEL	MON GREEN SAND	MAGOTHY AQUIFER	RARIT CONF UNIT	LLOYD AQUIFER	BED-ROCK		
B	1	404826 735000	2								-63		
B	2	404817 734958	0								-98		
B	3	404852 734909	9								-50		
B	4	405130 734616	10								-2		
B	39	404831 735005	2	-90							-63		
B	59	404820 735249	8	-80							-70		
B	69	404845 735210	0	-76							-71		
M	41	404240 740029	30	-46							-46		
M	114	404236 740037	30	-47							-47		
M	160	404705 735635	3	-146							-139		
M	161	404432 735915	30	7							16		BRIDGE BORING
R	A	403614 740310	0	-210	-124	-170					-190		BRIDGE BORING
R	B	403609 740326	90	-216	-99						-163		
R	C	403834 740413									-115		
R	D	403831 740440									100	R80	
R	7	403753 740437	10	-40									
R	14	403734 740445	25	-18									
R	18	403659 740416	45	-97							-162		
R	22	403700 740358	15	-162					-75				
R	65	403506 740538	10	-77					-84				
R	66	403529 740518	12	-87							-30		
R	73	403730 740449	50	-30							110		
R	79	403815 740519	120	76							100		
R	80	403830 740441	110	73							6		
R	81	403831 740433	40	-9				NOREC	NOREC	NOREC	-450		
R	82	403443 740316	5	-1000									
R	89	403659 740409	25	-11								R94	
R	91	403652 740404	25	-15									
R	93	403646 740359	25	-27									
R	94	403643 740357	25	-34									

R	95	403638	740353	35	-33									
R	96	403628	740331	55	-88									
R	99	403632	740325	0	-114									
R	100	403639	740307	0	-122									
K	A	403630	740220	0	-275	-105	-170			-183		-270		
K	1	403441	735917	5	-745	-150	-163	-229	-393	-471	-626			
K	9	404027	735945	4	-155	-91	-125				-145			
K	12	404150	735912	49	-50						-50			
K	15	404148	735852	15	-99						-93			
K	20	404054	735824	40	-96	-94								
K	23	404055	735759	57	-186						-186			
K	33	404204	735708	14	-162	-82	-131					K2069		
K	36	404208	735682	28	-88	-77						K1490		
K	37	404228	735623	25	-105	-92								
K	45	404048	735411	61	-223	-155								
K	49	404317	735725	18	-315	-82					-114	K1112		
K	58	404314	735728	16	-141	-75					-141			
K	64.2	404201	735654	10	-158	-85	-99					K3133		
K	64.5	404202	735655	10	-155	-58	-90					K3133		
K	64.6	404202	735655	10	-164	-67	-130					K3133		
K	82	404147	735802	20	-100						-100	K1548	NR	20 TO -99
K	110	404154	735943	72	-88						-88			
K	167	403918	740038	13	-137	-73	-82					K1148		
K	178	403420	735925	5	-113							K1558		
K	247	403813	735361	15	-164									
K	249	404132	735643	40	-135	-133								
K	255	404150	735613	54	-89	-89					-156			
K	256	404126	735725	50	-156	-124						K320		
K	259	404126	735859	40	-73	-73					-88			
K	261	404126	735910	35	-60									
K	277	404118	735854	37	-109	-88					-109	K320		
K	283	403432	735855	7	-147									
K	285	403804	735946	63	-149	-144					-65	K656		
K	290	404117	735900	39	-65									
K	316	403747	740121	65	-129	-125								
K	328	404119	735857	38	-76	-65					-75			
K	329	403952	735655	75	-158	-90	-128							
K	426	404231	735633	38	-102	-64					-173			
K	458	404253	735802	5	-1048	-115								
K	464	403643	735452	5	-489	-159	-202	-245	-284	-443				

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,148 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL							LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	MONTAUK GREEN SAND	MAGOTHY AQUIFER	RARITAN CONFINING UNIT	LLOYD AQUIFER	BEDROCK		
K 465	404411 735706	10	-390							-55		
K 514	403830 735545	26	-534	-149	-167			-198	PRES	-441		
K 515	403819 735624	20	-323	-146	-180			-197	-278			
K 517	403950 735709	78	-225	-100	-165			PRES				
K 518	403815 735617	13	-317	-157	-184			-215	-287			
K 519	403936 735613	29	-221	-131	-157			PRES				
K 520	403951 735525	42	-376	-98	-131			-268	-288	-358	K533	
K 521	403849 735547	34	-396	-136	-179			-223	-323			
K 522	403857 735721	50	-250	-91	-145			-240				
K 523	403754 735813	47	-488	-123	-153			-284	-248	-384		
K 524	403928 735551	33	-357	-146	-198			-254	-331	-349		
K 525	403818 735847	47	-353	-173	-217			-260	-288			
K 526	403949 735737	82	-318	-146	-211					-289	K531	
K 528	403921 735708	61	-310	-172	-195			-237		-310		
K 529	403839 735847	82	-158	-151								
K 530	403818 735810	33	-127	-112						-291		
K 531	403950 735740	82	-296	-146	-214			-199	-264	-409		
K 532	403819 735654	11	-454	-146	-178			-268	-288	-342		
K 533	403954 735523	42	-353	-98	-131			PRES	-273	-404		
K 534	403819 735644	17	-452	-150	PRES							
K 537	403851 735452	19	-194	-128	-164						K1286	
K 538	404015 735227	10	-162	-60	-112							
K 543	404107 735259	63	-222	-154	-218			PRES				VEATCH 65
K 569	404304 735600	15	-175	-33						-75		
K 570	404351 735635	7	-75									
K 584	403742 740126	60	-85	-70								VEATCH 55
K 611	404215 735805	10	-120	-92				-286	-349	-426		
K 619	403929 735357	25	-426	-101	-120			-114		-168	K2533	
K 637	404226 735641	35	-177	-55						-166	K1332	
K 638	404022 735937	9	-166	-135	-136							

												K1010	
K 639	484089	735940	28	-162	-122	-142				-33	K640.4	NR TO -33	
K640.1	484209	740021								-46	K640.4	NR TO -46	
K640.2	484202	740015								-50	K640.4	NR TO -50	
K640.3	484200	740013								-68		NR TO -68	
K640.4	484157	740010											
										-64		NR TO -64	
K 641	484218	740009								-92	K642.2	NR TO -92	
K642.1	484211	735957								-92		NR TO -92	
K642.2	484218	740003											
K 646	484021	735909	25	-169	-82	-129							
K 648	484019	735915	38	-159	-112	-114							
K 650	484015	735918	40	-155	-81	-122				-100			
K 654	484102	735933	25	-133						-147			
K 655	484109	735859	39	-175						-90			
K 656	484115	735856	43	-116						-102			
K 657	484055	735838	44	-183									
										-120			
K 658	484135	735809	61	-140	-103					-106			
K 659	484111	735846	38	-132						-67	K1073		
K 660	484119	735853	35	-90						-74			
K 661	484138	735840	54	-94	-71					-98			
K 662	484216	735924	0	-108									
										-101			
K 663	484152	735813	14	-101	PRES					-142			
K 664	484207	735748	17	-102	-104					-140			
K 665	484147	735831	12	-157	-108					-139			
K 666	484217	735733	55	-159						-123			
K 668	484054	735947	57	-142									
										-114			
K 669	484049	740001	48	-134				-75		-115			
K 670	484228	735718	30	-135						-76			
K 671	484209	735903	37	-98				-74		-130			
K 672	484238	735715	20	-150				-98		-101	K898		
K 673	484249	735708	14	-102									
								PRES		-100	K1977		
K 675	484307	735545	13	-209						-127	K731		
K 676	484108	735910	28	-135				-69		-176			
K 677	484300	735613	19	-196	-38			-46		-102			
K 678	484253	735635	39	-102				-47		-103			
K 679	484321	735628	35	-103									
K 680	483959	735228	5	-429	-105	-151	-211	-229	-408	-43			
K 682	484408	735737	10	-43						-98			
K 684	484212	735940	5	-99						-73			
K 685	484216	735913	7	-84						-146			
K 686	484241	735810	0	-146									

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL							LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	MONTAUK GREENSAND	MAGOTHY AQUIFER	RARITAN CONFINING UNIT	LLOYD AQUIFER	BEDROCK		
K 687	404212 735739	43	-157							-142		
K 688	404315 735757	0	-111					-44		-107		
K 689	404333 735808	31	-129							-109		
K 690	404307 735851	10	-184							-163		
K 691	404258 735700	18	-177							-149		
K 692	404407 735844	3	-85							-82		
K 694	404105 735918	16	-101							-88	K726	
K 698	403937 740040	0	-100	-73								
K 699	403753 740130	75	-66	-62								
K 700	404031 740015	6	-110	-51	-99					-110		
K 701	404006 740027	0	-83	-50								
K 702	404058 735936	28	-112							-88		
K 703	404041 740014	16	-122	-93	-104					-125		
K 704	404035 740036	7	-123	-51	-121							
K 705	404044 740100	10	-141							-110		
K 708	404132 740008	0	-114							-82		
K 709	404156 735909	56	-83							-62		
K 710	404401 735719	13	-41							-28		
K 711	404359 735628	0	-74							-74		
K 715	404233 735644	36	-84	-49								
K 717	404223 735716	45	-157							-141		NR 60 TO -293
K 718	403721 740121	80	-355	NOREC				NOREC		-294	K1091	
K 720	404029 740000	13	-90	-55						-72		
K 723	404202 735914	57	-84								K1283	
K 724	404239 735633	48	-89									
K 725	404104 735922	14	-101							-80		
K 728	404147 735906	36	-96							-79		
K 729	404141 735826	45	-130							-108		
K 730	404136 735902	36	-98							-68		
K 731	404107 735914	23	-107							-160		

												K1031	
												K1130	
K	887	404201	735556	49	-76	-46							
K	893	404225	735607	28	-98	-61			-148				
K	894	404215	735555	30	-252	-57							
K	898	404248	735709	-3	-71								
K	910	404010	735444	45	-137	-128							
												K920	
K	916	404019	735921	13	-149	-118							
K	917	404028	735906	10	-96								NR 118 TO -212
K	920	404020	735922	13	-151	-117	-122				-213		
K	921	404038	735741	118	-213	NOREC	NOREC						
K	922	403919	740027	12	-138	-87	-102						
											-160	K1030	
												K2070	
K	930	404037	735904	20	-160	-123	-129						
K	944	403912	740052	18	-139	-84	-102						
K	952	404146	735602	67	-55	-55						K1130	
K	955	404226	735610	16	-54	-47					-160	K1030	
K	956	404037	735905	22	-160	-96	-130						
												K2070	
K	1010	404009	735941	20	-161	PRES	-136					K1548	
K	1012	403912	740052	16	-159	-100	-124					K1548	
K	1015	404148	735807	20	-72	-72							
K	1018	404148	735907	18	-98	-44							
K	1020	403420	735942	6	-108								
											-162		
K	1021	403428	735859	10	-110								
K	1030	404037	735905	20	-162	-123	-132						
K	1031	404204	735554	49	-56	-56							
K	1051	404150	735803	20	-66	-60							
K	1054	404029	735230	26	-64	-63							
													VEATCH 130
							-123	-213	-493	-683			VEATCH 131
K	1056	403452	735248	7	-733		-127	-217	-487	-693			
K	1057	403503	735251	13	-711						-62		
K	1073	404117	735848	32	-88								
K	1091	404038	740007	11	-113	-38	-88						
K	1112	404314	735723	7	-48								
K	1130	404225	735613	18	-71	-63							
K	1148	403916	740036	11	-139	-86	-95					K2136	
K	1153	404206	735605	48	-61	-61						K3133	
K	1160	404201	735658	18	-125	-89	-101					K1191	
K	1190	404056	740025	18	-55	-54							
K	1191	404055	740026	1	-59	-59							
K	1192	404055	740011	38	-82						-207		VEATCH 5
K	1271	403920	740048	5	-1498	-90	-134					K2136	VEATCH 35
K	1273	404206	735605	48	-235	-65			PRES			K3133	VEATCH 37
K	1274	404202	735655	18	-155	-55	-140						

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,148 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL							LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	MDN GREEN SAND	MAGOTHY AQUIFER	RARIT CONF UNIT	LLOYD AQUIFER	BEDROCK		
K 1275	404202 735655	10	-165	PRES	-129						K3133	VEATCH 38
K 1283	404239 735632	45	-195					PRES				VEATCH 62
K 1286	404012 735229	10	-154	-80	-108							VEATCH 135
K 1287	403903 735734	50	-111								K1641	
K 1288	404143 735809	30	-78	-78							K1548	
											K2282	
K 1303	404256 735734	16	-74	-40							K3133	
K 1305	404200 735701	10	-156	-82	-112							
K 1309	403940 735458	30	-201	-124	-133							
K 1313	404146 735756	31	-130	-72						-129	K1340	
K 1319	404145 735757	31	-114	-72							K1340	
K 1322	403423 735954	5	-180	-119	-150		-180					
K 1332	404022 735937	10	-158	-121	-158							
K 1336	404204 735602	50	-113	-52							K2136	
K 1339	403941 735541	40	-129	-119								
K 1340	404145 735757	25	-120	-82						-120		
K 1343	403934 735539	39	-129	-123							K1340	
K 1344	404200 735701	10	-161	-85	-101						K3133	
K 1346	404232 735532	39	-129	-123								
K 1354	403911 735832	70	-110	-95								
K 1355	403905 735628	46	-129	-74							K1360	
K 1359	403908 735526	28	-177	-112								
K 1360	403904 735628	45	-90	-70								
K 1363	403923 735527	33	-137	-131								
K 1370	404338 735555	27	-50					-48				
K 1488	404147 735805	25	-83	-75							K1548	
K 1490	404229 735623	35	-100	-70								
K 1494	403841 740051	80	-164	-162								
K 1504	403928 735738	64	-116	-114								
K 1508	403912 735545	28	-118	-103								
K 1510	404003 735517	52	-153	-113								

K 1536	484833	735958	14	-142	-109	-122					
K 1548	484145	735804	38	-78	-78						
K 1558	483420	735925	5	-113				-71			
K 1560	484334	735552	30	-71							
K 1561	484111	740020	5	-55	-55						
K 1575	484211	735534	30	-55	-55						
K 1578	484058	735808	74	-129	-129						K3133
K 1600	484202	735657	10	-147	-70	-101					K3133
K 1629	484201	735656	10	-168	-60	-90					
K 1641	483900	735728	50	-154							
K 1662	484205	735740	8	-141	PRES				-122		
K 1713	484046	735644	50	-132	-128						
K 1857	484014	735533	100	-118	-108						
K 1900	484028	740049	10	-125	-119						
K 1932	483831	735611	26	-125							
K 1977	484308	735547	15	-148				-95			
K 1990	484234	735536	15	-55					-92		
K 2044	484135	735919	48	-92							
K 2056	484120	740008	10	-75	-52	-61					
K 2059	483709	735923	38	-184	-139	-158					
K 2069	484202	735710	10	-167	-75	-123			-105		
K 2070	483913	740053	18	-151	PRES	PRES					
K 2136	484204	735610	50	-62	-55						
K 2172	484144	735919	50	-68					-110		
K 2173	484215	735810	5	-110							
K 2204	483634	735729	19	-171	-148	-154			-40		
K 2227	484413	735726	10	-40							
K 2262	484257	735737	8	-53	-53						K3133
K 2286	484158	735653	15	-175	-68	-98					
K 2328	483638	735519	15	-185	-181						
K 2342	483641	735518	5	-149	-149						K3133
K 2434	484208	735659	10	-186	-72	-102					
K 2456	484033	735738	10	-91							
K 2488	483421	735826	10	-214	-148	-176					K2513
K 2512	484009	735953	10	-142	-120	-129					
K 2513	484009	735953	10	-120	-109						
K 2533	484228	735639	30	-62	-49						
K 2556	484047	735716	65	-100							
K 2568	484223	735527	20	-88	-77						
K 2582	483732	735737	10	-186		-140					

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,148 WELLS ON LONG ISLAND, NEW YORK

WELL IDENT-ICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL							LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARD-INERS CLAY	JAMECO GRAVEL	MON GREEN SAND	MAGOTHY AQUIFER	RARIT CONF UNIT	LLOYD AQUIFER	BED-ROCK		
K 2859	403451 735856	10	-490	-160	-190		-292	-360	-450			
K 2860	403822 735255	10	-206	-163	-183						K3132	
K 3129	403748 735721	30	-240	PRES	-204						K3132	
K 3130	403748 735719	30	-250	-172	-206						K3132	
K 3131	403749 735716	30	-261	-160	-200							
K 3132	403750 735717	30	-200	-180	-215					0		
K 3133	404150 735650	15	-180	-83	-107						K3184	
K 3151	403921 735450	29	-232	-66	-103		-170	-220			K3184	
K 3176	403920 735446	29	-146	-47	-136						K3184	
K 3177	403921 735447	29	-146	-46	-131							
K 3178	403922 735448	29	-146	-43	-131						K3184	
K 3179	403923 735448	29	-146	-43	-136						K3184	
K 3180	403921 735446	29	-173	-56	-133		-143				K3184	
K 3181	403922 735446	29	-146	-54	-133						K3184	
K 3182	403923 735447	29	-146	-57	-138							
K 3183	403925 735449	29	-173	-56	-133		-143				K3184	
K 3184	403924 735447	29	-174	-42	-134		-142			-65		
Q 13	404506 735554	24	-65							-11		
Q 17	404427 735656	17	-158				-10	-60	-190	-244		
Q 27	404435 735221	57	-244				-96					
Q 29	404229 735202	80	-145				-120	-200	-360	-421		
Q 31	404224 735133	70	-421	-84				-66	-126	-179	Q455	
Q 33	404701 735049	27	-183				-28					
Q 37	404401 734659	72	-71									
Q 52	404207 735341	80	-70	-70						-91		
Q 62	404502 735510	38	-91					-80			Q268	
Q 64	404429 735257	35						-69	-190	-241		
Q 65	404500 735106	20	-264							-70		
Q 95	404526 735611	20	-72				-160	-597	-808		Q1932	
Q 111	403635 734539	9	-1005									

Q	122	484428	735557	42	-83								
Q	123	483503	734952	8	-952	-197	-242	-348	-455	-751			
Q	127	484539	734954	40	-160				-58			Q1516	
Q	161	484507	735711	5	-145						-9		
Q	165	484529	735649	5	-200						0		
Q	171	484442	735618	46	-454						-10		
Q	183	484646	735658	5	-165				5	-131			
Q	184	484414	735452	90	-492				-49		-114		
Q	192	484337	735331	100	-73				0				
Q	206	484443	735409	47	-170				-95		-170	QBWS4	NR -50 TO -95
												Q678	
Q	224	483953	734526	15	-473	-109		-199	-423				
Q	237	484113	735109	36	-541		-108	-177	-262	-400	-520		
Q	262	484527	735403	10	-217				-28		-128		VEATCH 162
Q	263	484500	735458	38	-87				-47		-80		VEATCH 99
Q	268	484421	735255	27	-270				NOREC		-266		NR 27 TO -265
Q	272	484302	734934	13	-482				PRES	-313	-457	Q584	
Q	273	484257	734937	26	-462				-131	-282		Q584	
Q	274	484447	734759	20	-387			-25	-148	-284	-387		
Q	275	484543	734458	5	-451			-75	-231	-355		Q276	
Q	276	484511	734433	25	-506			-25	-191	-371	-504		
Q	278	484524	734438	16	-520			-59	-196	-336	-498	Q1057	
Q	282	484448	734743	30	-433			-38	-133	-277		Q283	
Q	283	484458	734758	27	-420			-41	-123	-283	-383		
Q	287	483624	734916	5	-712	-158	-238	-315	PRES	-655			
Q	290	483354	735328	5	-723	-195	-215	-288	-485	-688			
Q	301	484214	734935	67	-43	-43						Q1839	
Q	306	484147	734718	26	-71	-47						Q2443	
Q	310	484141	734413	47	-84			-58				Q3157	
Q	311	484107	734805	28	-232	-106	-177						
Q	312	484044	734552	22	-254	-48	-148	-242					
Q	314	484049	734752	35	-275	-81	-166		-275			Q3158	
Q	317	484154	734937	61	-539	-62	-202		-234	-392		Q566	
Q	318	484254	734813	131	-119			-79				Q2137	
Q	324	484155	734638	32	-91	-33						Q571	
Q	332	483943	734437	8	-367	-111		-132					
Q	333	483958	734562	12	-128	-49	-84					Q1197	
Q	334	483952	734535	8	-182	-87		-103				Q1385	
Q	335	484004	734628	13	-322	-78	-147	-284					
Q	336	484016	734716	10	-163	-85	-135					Q1876	
Q	337	484000	734742	8	-214	-166	-163						

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL								
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	MONTAUK GREENSAND	MAGOTHY AQUIFER	RARITAN CONFINING UNIT	LLOYD AQUIFER	BEDROCK	LOCATED NEAR WELL	REMARKS
Q 338	403957 734805	10	-220	-91	-196						Q1175	
Q 339	404002 734830	10	-197	-103	-174						Q634	
Q 340	404026 735135	9	-153	PRES	-71		-121					
Q 341	404243 735134	70	-176				-58					
Q 344	403959 735005	10	-326		-110		-178					
Q 345	404006 735040	10	-209		-143		-189					
Q 350	404020 735007	33	-622		-103		-208	-265	-453	-577	Q2384	
Q 364	404449 735333	63	-126					-27			Q2148	
Q 369	404438 735520	90	-72							-61		
Q 374	404632 735530	33	-31							-17		
Q 375	404633 735558	15	-43							-41		
Q 376	404618 735521	43	-79							-59		
Q 377	404539 735503	64	-23							-3		
Q 378	404549 735455	75	-28							-8		
Q 379	404529 735512	52	-95							-74		
Q 380	404559 735447	78	-30							-10		
Q 381	404647 735354	19	-76							-56		
Q 382	404617 735429	58	-69							-51		
Q 386	404451 735534	75	-147							-73	Q602	
Q 387	404425 735539	64	-112							-88		
Q 388	404433 735536	78	-133							-106		
Q 389	404508 735529	35	-49							-28		
Q 390	404351 735605	23	-188					-56		-171		
Q 391	404357 735557	62	-136							-115		
Q 392	404403 735549	65	-101							-85		
Q 393	404345 735557	17	-153					-59		-133		
Q 394	404411 735542	48	-127					-42		-107		
Q 395	404422 735704	7	-67							-67		
Q 398	404437 735642	2	-65									
Q 399	404447 735653	13	-55									

Q	403	403352	735448	5	-885	-192	-206		-237	-486	-643	-885	
Q	404	404852	735517	43	-3							8	
Q	405	404782	735347	0	-95							-89	
Q	406	404648	735514	53	-29							-24	
Q	407	404623	735521	22	-28							-23	
Q	408	404618	735608	6	-51							-42	
Q	411	404609	735435	64	-61							-41	
Q	412	404549	735424	66	-62							-42	
Q	413	404612	735518	56	-55							-38	
Q	414	404618	735352	21	-102							-71	
Q	415	404629	735342	8	-102							-82	
Q	416	404646	735325	0	-143							-89	
Q	417	404522	735447	46	-75							-54	
Q	422	404436	735728	7	-59							-49	
Q	423	404435	735708	17	-52							-42	
Q	425	404444	735535	75	-84							-64	Q453
Q	426	404446	435500	63	-84					-32		-64	
Q	427	404436	735502	91	-136					-37		-121	
Q	428	404415	735507	98	-169					-86		-149	
Q	429	404407	735529	64	-170					-31		-150	
Q	431	404409	735503	104	-139					-71		-118	
Q	432	404401	735509	115	-187					-68		-167	
Q	434	404353	735508	89	-174					-36		-147	
Q	435	404346	735511	63	-196					-78		-176	
Q	436	404313	735526	8	-289	-57				-155		-187	
Q	437	404328	735501	5	-255	-97				-131		-207	Q1274
Q	438	404325	735514	4	-284	-95				-113		-184	
Q	439	404513	735056	10	-118								Q1028
Q	440	404446	735041	27	-94								Q2420
Q	441	404508	735023	2	-83								
Q	442	404459	734959	10	-84								
Q	443	404439	735049	27	-78								Q1028
Q	444	404435	735036	2	-80								
Q	446	404414	735047	2	-88								Q24008
Q	447	404402	735039	2	-89								
Q	448	404328	735014	7	-53								
Q	449	404337	735017	1	-98								
Q	450	404545	735022	10	-72								Q1738
Q	451	404518	735038	17	-142								
Q	452	404504	735037	4	-87								

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL									
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	MONTAUK GREENSAND	MAGOTHY AQUIFER	RARITAN CONFINING UNIT	LLOYD AQUIFER	BEDROCK	LOCATED NEAR WELL	REMARKS
Q 453	404446 735535	68	-79							-77	Q1098	
Q 455	404701 735048	37	-63					-15				
Q 460	404541 734529	11	-446				-2	-146	-297	-399	Q484	
Q 461	404541 734529	11	-366				-2	-146	-297		Q484	
Q 462	404541 734529	7	-398				-4	-162	-275	-393	Q484	
Q 464	404541 734529	6	-381				-4	-145	-272		Q484	
Q 466	404541 734529	7	-384				3	-130	-305		Q484	
Q 468	404541 734529	2	-398				-19	-138	-300		Q484	
Q 480	404541 734529	9	-381				-28	-183	-278		Q484	
Q 484	404541 734529	7	-384				-3	-154	-259			
Q 490	404704 734939	5	-219					-45	-135	-219	Q495	
Q 491	404704 734939	9	-205					-53	-143		Q495	
Q 492	404704 734939	6	-222					-59	-171		Q495	
Q 493	404704 734939	7	-212					-44	-168	-208	Q495	
Q 494	404704 734939	5	-213					-59	-153	-208	Q495	
Q 495	404704 734939	4	-189					-57	-170			
Q 542	403453 734959	6		-191	-237		-291	-455	-684		Q1071	
Q 556	404200 734644	32	-391	-32			-106	PRES			Q571	
Q 557	404223 734800	58	-139				-56				Q1507	
Q 558	404054 734917	33	-130	-127								
Q 559	404021 734839	16	-281	-97	-161		-198	-256			Q1839	
Q 561	404139 734715	25	-65	-65								
Q 562	404140 734716	23	-658	-67			-120	-238	-458	-649		
Q 563	404302 734513	70	-68				-24				Q564	
Q 564	404302 734513	70	-229				-24					
Q 565	404202 734916	65	-495	-51	-249			-351	-415			
Q 566	404154 734937	61	-231	-84	-202						Q2137	
Q 567	404254 734813	131	-504				-79	PRES	-410			
Q 568	404200 734403	50	-819				-55	-354	-554	-811		NR 30 TO -479
Q 571	404200 734644	30	-602					NOREC	-480	-600		

Q	572	484150	734719	25	-758					NOREC	NOREC	-650	Q1839	NR 25 TO -549	
Q	580	484425	734341	115	-553				15	-293	-469		Q1914		
Q	581	484420	734340	112	-570				6	-272	-466		Q1914		
Q	582	484418	734339	110	-591				16	-280	-461				
Q	584	484257	734937	10	-620					-120	-320	-440			
Q	586	484347	735025	15	-420					-135	-325	-414	Q2413		
Q	595	484458	734810	20	-427				PRES	-115	-235				
Q	597	484325	735001	0	-89					-89					
Q	601	484524	735022	0	-158							-85			
Q	602	484453	735533	50	-169						-53	-110			
Q	603	484351	735558	69	-133										
Q	633	484004	735022	11	-180			-117							
Q	634	484024	735135	10	-139	-87	-131			-66				VEATCH 186	
Q	669	484748	735028	10	-149										
Q	676	483909	734739	0	-283	-140	-200								
Q	678	483953	734526	10	-261	-99			-120				Q1175		
Q	680	483957	734831	10	-182	-105	-175								
Q	681	483958	734715	5	-151	-84	-137								
Q	682	484001	734653	7	-251	-78	-147								
Q	683	484001	734802	10	-283	-62	-202		-250						
Q	684	483959	734553	10	-410	-68	-168		-183						
Q	689	484116	734822	40	-82	-71									
Q	698	484119	734736	20	-180	-75	-169								
Q	710	484605	734643	75	11				14						
Q	720	483955	734446	10	-388	-45	-81		-127						
Q	721	483958	734358	22	-398				-86						
Q	722	483956	734344	17	-373				-41						
Q	724	484049	734501	27	-338				-53						
Q	952	484425	735523	29	-28							-15			
Q	954	484536	735626	12	-289				-49						
Q	957	484200	734810	45	-137							-25			
Q	962	484506	735642	20	-175										
Q	964	484546	735243	20	-105							-37			
Q	966	484446	735724	8	-192					-42			Q1820		
Q	978	484443	735423	60	-110								Q1837		
Q	985	484207	734832	35	-143				-61	-72	-234		Q1827		
Q	1026	484446	735011	8	-287					-82	-232				
Q	1027	484446	735013	8	-275							-316		NR 5 TO -315	
Q	1028	484438	735039	5	-419										
Q	1036	483451	735004	6	-1043	-192	-248		-336	-467	-731	-974			

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENT-ICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL								
		TOP	BOTTOM	GARD-INERS CLAY	JAMECO GRAVEL	MON GREEN SAND	MAGOTHY AQUIFER	RARIT CONF UNIT	LLOYD AQUIFER	BED-ROCK	LOCATED NEAR WELL	REMARKS
Q 1032	404459 735138	40	-223					-21	-182	-211		
Q 1035	404215 734752	62	-215				-89				Q1965	
Q 1036	404209 734831	55	-128				-40				Q1037	
Q 1037	404209 734831	51	-145				-23					
Q 1041	404528 734441	5	-188				-76				Q1057	
Q 1042	404538 734442	5	-199				-76				Q1057	
Q 1043	404532 734442	5	-128				-73				Q1057	
Q 1045	404537 734443	5	-181				-61				Q1057	
Q 1048	404528 734437	6	-177				-93				Q1053	
Q 1049	404519 734439	8	-154				-109				Q1053	
Q 1053	404518 734448	12	-198				-132					
Q 1056	404523 734437	5	-168				-125				Q1057	
Q 1057	404527 734439	9	-38				-38					
Q 1063	404132 734548	32	-112				-29				Q1532	
Q 1064	404158 734826	35		-55								
Q 1071	403454 734956	12	-851	-188	-248		-268	-468	-737			
Q 1085	404348 735531	6	-164	-78				PRES		-158		
Q 1086	404445 735218	52	-297					-38	-206	-227	Q1241	
Q 1087	404444 735211	52	-66					-38			Q1241	
Q 1093	404631 735449	53	11							11		
Q 1096	404359 734741	38	-14				-14					
Q 1098	404439 735534	72	-143							-62		
Q 1175	404002 734834	10	-206	-113	-176							
Q 1197	403958 734602	15	-119	-47	-98		-117					
Q 1221	404522 735624	17	-161							-21		
Q 1238	403539 734626	10	-154									
Q 1239	404218 734751	50	-158				-33				Q1965	
Q 1241	404445 735211	52	-265					-8	-284			
Q 1246	404528 735553	42	-178							-21		
Q 1257	404548 735542	30	-128							-17		

											-8	Q2333	
Q 1258	484448	735547	55	-8							8		
Q 1272	484525	735648	10	-185									
Q 1274	484326	735449	15	-65	-40							Q1965	
Q 1275	484217	734754	58	-111				-33					
Q 1278	484313	735044	56	-114				-37					
												Q1532	
Q 1291	484132	734537	42	-29				-27					
Q 1293	484424	734358	115	-565				-23	-255	-475			VEATCH 195
Q 1304	483952	734916	14	-148	-121	-132							VEATCH 196
Q 1305	483948	734538	12	-168	-66			-111					VEATCH 220
Q 1311	484258	734538	58	-349				-40				Q1957	
								-100					
Q 1314	484218	734803	38	-177					-59				
Q 1328	484456	735303	53	-62							-169		
Q 1352	484618	735157	13	-195					-74	-92	-142		
Q 1353	484756	734942	8	-162				-31				Q3012	
Q 1372	484308	734357	80	-142									
									13	-144	-195	Q1542	
Q 1373	484656	735029	58	-212					20	-151	-195	Q1542	
Q 1374	484653	735030	55	-200								Q1379	
Q 1376	484152	735109	83	-128		-103		-114					
Q 1378	484120	735112	42	-170		-111							
Q 1379	484154	735107	83	-127		-103		-114					
								-114					
Q 1383	483618	734514	28	-224				-28				Q3012	
Q 1384	484308	734357	80	-152				-72	-268			Q1507	
Q 1392	484227	734758	60	-301					-58	-238	-281		
Q 1400	484481	735229	20	-282					-78				
Q 1412	484259	735427	42	-98									
								-85				Q2356	
Q 1423	484233	734638	55	-247									
Q 1447	484148	734847	45	-98	-84							Q3167	
Q 1449	484187	734885	28	-108	-103			-62				Q1815	
Q 1458	484287	734459	55	-77					-59				
Q 1465	484884	735025	12	-115									
								-75				Q3008	
Q 1472	484415	734657	78	-184									
Q 1477	484658	735022	34	-144	-82	-111							
Q 1483	484655	735118	25	-159		-128		-143					
Q 1493	484148	735041	45	-98					25	-138	-169	Q1542	
Q 1497	484653	735038	55	-169									
									25	-138	-169	Q1542	
Q 1498	484653	735038	55	-169							-76	QBW52	
Q 1502	484426	735814	15	-78									
Q 1503	484316	734837	75	-32				-32					
Q 1507	484222	734758	58	-99				-94					
Q 1511	484139	735105	48	-97									

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENT-ICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL							LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARD-INERS CLAY	JAMECO GRAVEL	MON GREEN SAND	MAGOTHY AQUIFER	RARIT CONF UNIT	LLOYD AQUIFER	BED-ROCK		
Q 1518	404539 734957	35	-77									
Q 1521	404029 734553	20	-162	-44	-126							
Q 1528	404137 735158	70	-118		-114							
Q 1532	404134 734542	40	-414				-21	-334			Q1629	
Q 1535	404249 734435	70	-380				-39	-356				
Q 1536	404324 734554	190	-83				-73				Q1747	
Q 1542	404653 735030	53	-171					23	-132	-171		
Q 1600	404336 734503	98	-356				-12	-283				
Q 1619	404654 735558	15	-28							-27		
Q 1620	404439 735413	60	-173					-42		-170		
Q 1629	404249 734435	70	-242				-35					
Q 1630	403518 734827	7	-168		-119							
Q 1632	404435 735000	18	-45							-45		
Q 1635	404510 735553	3	-37							-37		
Q 1638	404424 735615	13	-60							-60	QBWS2	
Q 1640	404617 734404	90	-58				-20					
Q 1678	404541 735032	12	-258					-137	-169	-255		
Q 1695	404615 734400	85	-84				-4				Q1736	
Q 1730	404516 735035	10	-260									
Q 1736	404617 734410	88	-30				-6					
Q 1738	404446 735635	15	-131							-26		
Q 1747	404323 734553	180	-93				-93					
Q 1787	404303 734616	110	-138				-87				Q1812	
Q 1789	404552 734621	80	-9				25					
Q 1802	404338 735115	90	-72									
Q 1811	404151 734921	50	-97	-95								
Q 1812	404303 734816	110	-145				-69					
Q 1815	404207 734459	58	-248				-56					
Q 1823	404057 734854	40	-242	-85	-183			-232				
Q 1835	404145 734734	35	-313	-57			-155	-297				

Q 1839	484158	734719	25	-61	-61			-20				
Q 1841	484423	734337	115	-242				1				Q3883
Q 1850	484516	734230	132	-71				-43	-88			
Q 1851	484341	735122	80	-223								Q1876
Q 1861	484019	734717	9	-176	-68	-130						
Q 1876	484019	734717	8	-172	-84	-148						Q3883
Q 1909	484515	734231	132	-118				26			-30	
Q 1912	484516	735600	40	-360				-14				
Q 1914	484418	734342	120	-138								
Q 1918	484332	735517	15	-67	-63							
Q 1922	484558	735338	30	-103					-44		-102	
Q 1923	484258	734538	65	-246				-22	-225			Q1957
Q 1924	484141	734413	47	-442				-56	-384			Q2443
Q 1926	484628	734748	90	-206					6	-168		
Q 1929	483631	734542	9	-1036				-123	-579	-777		Q1932
Q 1930	483633	734545	8	-122				-118				Q1932
Q 1931	483634	734544	8	-132				-124				Q1932
Q 1932	483635	734542	8	-126				-118				
Q 1933	484443	735307	77	-178					-47		-175	
Q 1937	484548	734609	68	-15				5				
Q 1941	484341	734858	78	-36				-29				
Q 1957	484258	734538	65	-238				-58	-221			
Q 1958	484141	734413	47	-395				-82	-387			Q2443
Q 1965	484212	734753	36	-227				-91				
Q 1978	484451	735336	65	-144					-5		-144	Q2148
Q 1979	484451	735335	65	-25					-19			Q2148
Q 1982	484332	734429	90	-363				-9	-274			Q2188
Q 1983	484217	734915	70	-371	-53			-264	-243			
Q 1984	484137	734522	45	-358				-35	-336			
Q 1985	484386	734637	145	-155				-62				Q2001
Q 1999	484156	734613	35	-366	-48			-144	-365			
Q 2000	484332	734429	90	-28				-28				Q2188
Q 2001	484259	734634	123	-84								
Q 2003	484156	734526	55	-281				-49			-31	Q2028
Q 2025	484648	735425	25	-42								
Q 2026	484842	734337	40	-410				-48				
Q 2028	484156	734526	54	-281				-32				
Q 2086	484600	735518	45	9							9	
Q 2122	484285	735600	60	-355	-68	-151		-188	-208	-310		Q2332
Q 2137	484254	734813	130	-120				-88				

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,148 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL							LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	MONTAUK GREENSAND	MAGOTHY AQUIFER	RARITAN CONFINING UNIT	LLOYD AQUIFER	BEDROCK		
Q 2138	404208 735002	60	-83								Q2332	
Q 2140	404124 734930	48	-274	-76	-183			-253			Q2189	
Q 2144	404601 735011	12	-134								Q2592	
Q 2148	404452 735337	65	-20					-16				
Q 2149	404126 734646	25	-75	-71								
Q 2188	404332 734429	90	-192				-19					
Q 2189	404124 734930	48	-83	-80								
Q 2195	404546 734949	25	-87					-58				
Q 2202	404312 735424	52	-193					-95		-193		
Q 2205	404117 734522	45	-351				-26				Q2243	
Q 2206	404038 734436	25	-108	-48	-89		-105					
Q 2227	404056 734627	20	-399	-59	-208		-232					
Q 2243	404117 734522	45	-62				-3					
Q 2255	404224 734503	63	-290				-82				Q2300	
Q 2259	404216 734423	55	-319				-45				Q2276	
Q 2261	404404 735103	30	-54				-48					
Q 2266	403626 734457	22	-110									
Q 2272	404241 735359	95	-52					-154	-202	-234	Q2394	
Q 2273	404434 735156	30	-247					-9	-109			
Q 2274	404748 734832	20	-148								Q2276	
Q 2275	404216 734423	55	-58				-45					
Q 2276	404216 734423	55	-319							-192		
Q 2280	404622 735129	8	-194					-31	-129	-188		
Q 2282	404733 734747	9	-188								Q2384	
Q 2289	404012 735006	30	-132		-103						Q2300	
Q 2299	404224 734503	63	-100				-62					
Q 2300	404224 734503	63	-220				-62				Q2592	
Q 2309	404602 735013	5	-123								Q2343	
Q 2321	404245 734406	65	-309				-82				Q2332	
Q 2325	404208 735002	60	-180	-76	-149		-180					

Q 2329	484159	734629	38	-79				-38				
Q 2331	484783	734985	65	-48								
Q 2332	484208	735882	60	-192	-71	-151	-165			-12		
Q 2333	484443	735881	25	-12								
Q 2343	484245	734486	65	-175			-77					
Q 2349	483935	734515	18	-88	-78							
Q 2356	484234	734629	58	-165			-97					
Q 2361	484329	734827	74	-262			-33	-198				Q2409
Q 2362	484328	734818	82	-244			-63	-205				
Q 2363	484343	734831	64	-366			-38	-184	-347			
Q 2364	484323	734838	74	-264			-32	-177				Q2374
Q 2366	484559	735512	45	2						2		
Q 2373	484323	734838	74	-193			-31	-181				Q2374
Q 2374	484323	734838	74	-193			-31	-181				
Q 2377	484518	735005	28	-258						-248		Q2402
Q 2378	484718	734622	12	-182								
Q 2384	484822	734957	27	-126		-111						
Q 2385	484343	735008	5	-99				-128				Q2400B
Q 2386	484411	735842	5	-138				-134	-232			Q2394
Q 2390	484434	735159	35	-252								
Q 2392	484349	735009	5	-168				-129				Q2394
Q 2393	484434	735159	35	-138								
Q 2394	484434	735158	35	-115				-88				Q2400B
Q2400A	484484	735840	13	-184								
Q2400B	484484	735840	18	-121						-253		
Q 2402	484509	735011	28	-253			-38	-258				Q2435
Q 2404	484352	734449	186	-256			-75	-224				Q2432
Q 2405	484248	734682	62	-288			-32					Q2409
Q 2408	484329	734827	74	-85			-32	-183				
Q 2409	484329	734827	74	-287								
Q 2410	484411	735819	5	-195				-122				
Q 2413	484338	735828	8	-127				-54	-208			Q2428
Q 2416	484584	735818	7	-268								
Q 2417	484455	735852	18	-293				-71	-213			Q2428
Q 2419	484583	735819	7	-284				-73	-216			
Q 2428	484583	735828	7	-287			-388					
Q 2422	484825	734838	28	-381	-83	-163	-124					
Q 2426	483919	734428	6	-238	-44		-53	-383				Q2443
Q 2430	484135	734482	47	-413			-89	-225				
Q 2432	484248	734682	62	-238								

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,148 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL								LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	MONTAUK GREENSAND	MAGOTHY AQUIFER	RARITAN CONFINING UNIT	LLOYD AQUIFER	BEDROCK			
Q 2435	404352 734449	160	-202				-34						
Q 2437	404329 735214	80	-118				-87	-92					
Q 2443	404135 734402	47	-319				-84			-84			
Q 2445	404500 735606	26	-84					10	-140				
Q 2468	404027 735024	10	-165										
Q 2588	404512 734458	90	-87				-10			-238			
Q 2592	404603 735000	12	-238										
Q 2802	404506 734613	65	-25				-11						
Q 2885	404412 734538	105	-41				-28						
Q 2700	404245 735017	110	-66				-66						
Q 2712	404450 734402	105	-53				10			15			
Q 2721	404507 735620	35	-265									Q2955	
Q 2765	404038 734458	25	-425				-40						
Q 2791	404624 734835	80	-60					0					
Q 2837	404237 735136	60	-120	-80									
Q 2955	404048 734451	25	-430				-41	-425				Q3003	
Q 2987	404515 734231	132	-327				3	-274					
Q 2988	404402 734858	104	-360				-55	-140	-249				
Q 2990	404129 734849	50	-264	-115	-164		-224					Q3014	
Q 2991	404310 734700	110	-404				-45	-215	-400				
Q 3000	404413 734701	70	-209				-66	-200					
Q 3002	404610 734621	70	-47				1						
Q 3003	404515 734231	140	-183				21						
Q 3012	404310 734359	84	-42				-20						
Q 3014	404310 734700	110	-227				-37	-211					
Q 3028	404340 734231	95	0									Q3034	
Q 3026	404237 734554	60	-275				-85	-257				Q3062	
Q 3029	404059 734500	25	-410				-44	-401					
Q 3030	404356 735151	10	-320				-42	-68	-235	-288		Q3036	
Q 3036	404354 735200	20	-279				PRES	-40	-225				

Q 3034	404237	734654	60	-228				-85			
Q 3056	404054	734403	46	-429				-86	-425		Q3083
Q 3062	404059	734508	25	-405				-44	-401		
Q 3083	404056	734406	46	-323				-49			
Q 3109	403933	734829	22	-427	-109	-202		-234	-376		
Q 3110	403845	734757	10	-461	-104	-186		-346	-431		
Q 3111	403858	734648	14	-486	-112	-198		-295	-447		
Q 3112	403939	734720	11	-418	-99	-145		-293	-381		
Q 3156	404058	734755	35	-278	-88	-159			-278		
Q 3157	404107	734805	28	-259	-102	-173		-244	-257		
Q BWS2	404424	735618	25	-29						-29	
Q BWS3	404338	735414	29	-158					-86	-158	
Q BWS4	404446	735406	49	-127					PRES	-127	
Q BWS5	404612	735233	23	-159						-159	
Q BWS7	404429	734632	61	-535				-32	-151	-302	-482
Q BWS9	404233	734948	115	-537						-388	-498
QBWS10	404612	734611	61	-411				-21	-99	-274	-381
QBWS12	404442	734858	16	-406				-52	-86	-276	-332
QBWS13	404308	735257	102	-296	-148				-254		-294
QBWS14	404303	734914	85	-490				-55	-185	-338	-450
QBWS15	404612	734834	97	-299					-45	-185	-258
QBWS16	404530	735231	60	-172					-96		-172
QBWS17	404431	735258	38	-242	-67				-82		-222
QBWS18	404227	735106	77	-429				-66	-166	-366	-429
QBWS19	404655	734813	65	-297					-5	-137	-225
N 2	4039306734017		19	-63				-48			
N 3	403931	734234	5	-460	-61			-107			
N 6	403953	734316	10	-328				-52			
N 7	404043	734131	20	-958				-48	-519	-759	
N 10	404229	734246	51	-351				-79	-351		
N 11	404224	734238	50	-398				-38	-358		N9151
N 15	4044270734149		116	9				9			N1958
N 16	4044160734015		89	-356				3	-343		N6918
N 17	4044350734020		104	-366				-21			
N 19	4045150734112		121	1				23			
N 20	4046050734232		210	-6				65			N9110
N 22	4046420734405		16	-134				-57			N9110
N 23	404642	734405	16	-449				-54	-178	-280	-416	N9308
N 24	404735	734242	12	-448					-171	-261	-416
N 29	4048306734148		29	-186				-173			

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WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL							LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	MONTAUK GREENSAND	MAGOTHY AQUIFER	RARITAN CONFINING UNIT	LLOYD AQUIFER	BEDROCK		
N 31	4040000734429	9	-363						PRES	-355		
N 33	4050110734150	20	-352							-345		
N 36	4051110734302	46	-234							-199	N37	
N 37	4051130734302	52	-88							-166		
N 38	4051320734141	85	-337							-330		
N 41	4035360733936	6	-1251				-134	-861	-1038		N7776	
N 42	4035370733939	6	-1197				-124	-822	-1038		N7776	
N 43	4035310734012	8	-1279				-85	-791	-946		N6450	
N 44	4035310734023	6	-1276				PRES	-786	-959		N6450	
N 45	4035360733943	6	-1127				-126	-814	-1009		N7776	
N 46	4035340733527	8	-1258	-42			-92	-854	-1065		N6850	
N 47	4037170733916	6	-176	-52	-95		-130					
N 48	4039240733917	17	-506				-39				N50	
N 50	4039230733916	16	-507				-90					
N 52	4039290733826	27	-523	PRES			-90				N9792	20 FT -22
N 54	4039320733749	28	-73				-36					20FT -19
N 57	4039130733717	11	-139				-25					20FT -21
N 62	4039050733615	10	-190				-47					
N 67	4039220733535	24	-1028				PRES	PRES	PRES		N69	
N 68	4039220733532	25	-527				-60				N69	
N 69	4039220733537	21	-484				-31					
N 72	4041040733741	44	-572				-17					
N 73	4040560733553	30	-686				-10					
N 82	4043000733707	61	-481				-12					
N 83	404306 733713	1	-1004				2	-527	-702		N7290	
N 87	4043240733755	1	-793				10	-488	-646			
N 93	4043520733831	75	-7				-7					
N 97	4044480733812	114	-261				11				N98	
N 98	4044460733813	114	-255				11					
N 101	4045210733534	108	-291				45					

N	102	4845340733743	175	78				81				N7513				
N	105	4846520733727	154	-353				10								
N	107	4847330733524	212	-294				153				N570				
N	109	4849250733817	48	-481					-272	-374						
N	110	4849310733821	56	-463					-296	-335						
										-337	-411					
N	118	4852440733509	65	-412						-411	-492					
N	119	4852440733523	80	-492						-363	-478					
N	120	4852410733526	80	-478						PRES	-467					
N	122	485352 733704	5	-470						-285						
N	123	4853530733645	25	-279												
N	128	4835500733027	6	-1028	PRES		PRES	PRES	PRES			N8414				
N	129	4836240733014	10	-946	PRES		PRES	PRES	PRES							
N	130	4837520733010	5	-63	-50							N7796				
N	131	4839490733417	11	-519				-68								
N	133	4839530733420	21	-508				-66								
N	134	4839500733415	10	-512				-56				N7796				
N	135	4840020733423	20	-138				-10							20FT	-12
N	136	4840450733418	25	-97				-33								
N	137	4839530733050	10	-80				-32								
N	138	4840500733107	25	-100				-17								
N	140	4842300733134	55	-101				0								
N	141	4841420733435	28	-81				-12								
N	152	4840200733410	141	-343				73				N813				
N	167	4851400733417	55	-68				34								
N	173	4853370733440	38	-360						-322						
N	181	4840300732900	24	-900				-89	-796						20FT	-28
N	184	4840250732902	10	-151				-90							20FT	-38
N	185	4843000732733	45	-227				-25								
N	190	4844500732654	140	-554				96								
N	198	4849170732929	240	-685				40	-390	-578						
N	199	4849220732924	235	-376				20			-200					
N	210	4849550734524	30	-482				-41								
N	248	483946 734252	14	-176				26	-254	-489		N1332				
N	263	4845320734229	171	-584				92								
N	268	4840050734010	172	56												
N	273	4847070734353	58	-35				-25			-190					
N	314	4851430734330	60	-190												
N	319	4835130733957	10	-370				-80								
N	320	4836230733925	5	-370	-70	-100		-124								
N	373	4840250733500	149	-31				74								

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENT-ICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL								LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARD-INERS CLAY	JAMECO GRAVEL	MON GREEN SAND	MAGOTHY AQUIFER	RARIT CONF UNIT	LLOYD AQUIFER	BED-ROCK			
N 374	4046430733504	205	102				168						
N 375	4046530733520	182	32				162						
N 377	4047220733529	200	-143				173						
N 381	4047500733641	300	1				200						
N 384	4046590733837	132	-118				32						
									-197				
N 417	405403 733644	18	-228				PRES	PRES	-215				
N 418	405202 733638	18	-215						-250				20FT -20
N 420	405401 733616	18	-332				-60						
N 440	4048030733103	8	-72	-40				-152	-308				
N 502	4053400733113	8	-362										
								-131	-270				
N 504	4054220733836	19	-279						-292			N4388	
N 506	4054450733135	8	-310				-36						20FT -25,-41
N 558	4048440734400	44	-138				-109						
N 559	403713 734333	20	-109	-64			-27	-369					
N 570	4049190732931	237	-369										
							54						
N 576	4048050733134	144	-205				-20					N8790	
N 578	4044550733909	110	-305				-104	-184	-278				
N 599	4048500734123	78	-378				33						
N 613	4051490733417	55	-85				-14						
N 629	4041410734143	55	-16										20FT -37
							-47						
N 637	4038210733450	5	-102				138					N851	
N 638	4048110733004	295	-265				48						
N 650	4045330733936	108	-242				17					N8848	
N 651	4045340733933	105	-243					-148	-212				
N 661	4051510733816	60	-343										
								-274	-335				
N 662	4049400733927	11	-353						-272	-312			
N 687	404743 734444	8	-362				-6						
N 693	4042200734242	90	-17					-153	-225				
N 695	4051470733749	47	-247					-313	-336	-433		N906	
N 842	4050320733912	8	-433										

N 905	4856348733912	9	-410				PRES	PRES	-427		
N 914	483932 734243	10	-104	-60		-88					
N 941	4841478734881	55	-12			-8					
N 1030	4841148733648	60	-55			-15					
N 1122	4846458734833	170	40			75					
N 1123	4845398734884	125	32			66					
N 1155	4848888733712	261	31			73					
N 1175	4849828733539	177	19			97					
N 1176	4847888733531	195	-3			163				N7549	
N 1177	4846488733513	183	37			156					
N 1190	4851328733487	128	29			35					
N 1210	4858238733155	187	44			98					
N 1212	4848488733119	227	42			104					
N 1227	4858558732968	172	38			132					
N 1228	4849548732939	224	35			38					
N 1229	4848488732918	251	50			93					
N 1244	4849188732788	249	-13			184					
N 1245	4848288732659	268	58			192					
N 1248	4847838732642	186	62			97					
N 1291	4849488734128	185	-298					-235			
N 1293	4847878733732	182	18			22					
N 1298	484655 734445	15	-378			-78	-132	-243	-325		
N 1389	4845498734821	185	-218			54					
N 1326	4847228734382	96	-99			12				N5578	
N 1328	4847138734185	177	-593			55	-234	-358	-586		
N 1332	4845388734238	162	-48			43					
N 1335	4837448734238	25	-117	-58		-110					20FT -15
N 1346	483858 734238	5	-143	-58		-142					
N 1426	4843528733828	74	-888			-6	-458	-628			
N 1476	4858578733251	138	47			101					
N 1477	4851258733847	216	22			38					
N 1481	4846888733829	149	72			78					
N 1486	4853258732933	5	-495					-475			
N 1499	4837598733928	6	-239			-51					
N 1581	4849488734126	188	-298					-258		N3888	
N 1585	4842248734841	65	-23			-13					
N 1602	4848258733932	38	-583			-52					
N 1603	4841128733935	32	-587			-26				N3528	
N 1618	484631 734215	83	-582			-52	-184	-324	-582	N5110	
N 1651	4852318733653	182	-388					-259			

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,148 WELLS ON LONG ISLAND, NEW YORK

WELL IDENT-ICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL								LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	MONTAUK GREEN SAND	MAGOTHY AQUIFER	RARITAN CONFINING UNIT	LLOYD AQUIFER	BEDROCK			
N 1658	404400732949	115	-185				67						
N 1667	404524073353Z	108	-129				33					N7785	
N 1686	404723034349	95	-255				30	-125				N5576	
N 1687	404723 734349	95	-130				PRES	-113				N5576	
N 1715	404908734109	101	-419				-118	-165	-264	-397		N2030	
N 1716	404911034111	101	-412				-115	-158	-254	-408			
N 1742	403910073350Z	20	-252				-37						20FT -36
N 1744	403922034017	20	-57				-50						
N 1771	404743034034	212	-158				-149						
N 1793	404338 733307	91	-209				38						
N 1802	404512034210	132	-618				9	-284	-427	-616			
N 1804	404528 734149	119	-137				1					N8373	
N 1805	405427033112	15	-337					-142	-298				
N 1818	404532 734209	141	-94				21						
N 1819	404514034158	117	-167				9						
N 1825	404756033732	200	-167				82						
N 1835	404519 734210	122	-148				1						
N 1841	404515034159	118	-141				8					N4207	
N 1869	403847033302	10	-122				-42						20FT -33
N 1877	404810033912	20	-535				28	-248	-405			N2571	
N 1917	405138033824	15	-292					-158	-288			N4448	
N 1922	404523032947	125	-68				63						
N 1926	404841 734533	51	-235						-188	-235			
N 1927	403521033019	10	-1461	-89			-121	-859	-1051	-1461		N8233	20FT -20
N 1939	405314033155	5	-374					-169	-332				
N 1948	405300033258	20	-488					-198	-358			N9595	
N 1958	404426 734148	118	-641				18	-296	-491	-639			
N 2002	404930033850	18	-454				-15	-229	-342				
N 2008	404110034008	45	-18				-14						
N 2017	405311033200	10	-385					-159	-325				

N 2625	4853530733114	23	-378					-192	-372				
N 2628	4847310734007	254	-358				59	-237					
N 2630	4849070734109	102	-263				-113	-161	-256				
N 2635	4847370734117	141	-4				74						
N 2652	4848290733953	159	-249				-34	-208			N5228		
N 2664	4839390732912	5	-66				-59						
N 2687	4851450733826	50	-295					-163	-278		N6549		
N 2688	4852090732844	159	-446				-174	-242	-439				
N 2692	4848290733951	158	-121				-35				N5228		
N 2113	4853090733137	18	-439					-190	-350				
N 2132	4853370733015	18	-459						-396				
N 2169	4846490734215	58	-182				-61	-182					
N 2201	4845190733427	115	-487				65	-445			N8497		
N 2203	483886 734412	5	-177	-76	-142		-158						
N 2214	484826 734484	47	-245						-173	-243			
N 2225	4839280732555	5	-169	-49		-78	-89						
N 2236	4845190733427	115	-455				65	-445			N8497		
N 2241	4853250733151	18	-358						-341				
N 2269	4849160734116	110	-155				-125						
N 2349	4842850733235	55	-51				-5						
N 2359	4839860732829	5	-58	-44			-49					20FT	-34
N 2400	4847180733884	166	-321				61	-311					
N 2422	4844410733851	93	-17				68				N7186		
N 2424	4849350733849	18	-445				-48	-218	-353				
N 2487	4845460733902	135	-299				-20						
N 2527	4844430733851	94	-24				69				N7186		
N 2528	4850810733432	92	-251				-195	-284					
N 2566	4854450733185	15	-482					-148	-382				
N 2566	4845430734047	173	38				38						
N 2578	4848110733916	51	1				32				N2571		
N 2571	4848110733914	42	-25				8						
N 2572	4837310733835	5	-95	-48			-92						
N 2574	4839510733615	20	-524				-42				N8196	20FT	-16
N 2578	484833 734312	25	-478				-57	-434			N5145		
N 2580	4843230733145	75	-1				0						
N 2597	483532 734834	6	-1246	-183	-117		-137	-788	-945				
N 2602	4845160733434	114	-744				-39	-476	-635				
N 2747	4844460733650	92	-325				11				N2748		
N 2748	4844450733651	94	-457				60	-453					
N 2749	484751 734485	56	-389					-194	-258	-342	N4266		

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,148 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL							LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	MONTAUK GREEN SAND	MAGOTHY AQUIFER	RARITAN CONFINING UNIT	LLOYD AQUIFER	BEDROCK		
N 2790	403850 733953	3	-882				-85	-884	-853		N7889	
N 2921	403650 733850	8	-112	-67			-104					20FT -37
N 3078	403750 733900	5	-141	-57			-99					
N 3147	404540 732841	121	-129				63				N7186	
N 3154	404430 733648	91	19				56					
N 3185	404100 733847	106	-393				-3				N7878	
N 3193	404330 733840	85	-235				11					
N 3245	403940 732645	5	-210	-55			-66				N7523	
N 3312	404100 733829	70	-237				7				N8761	20FT -35
N 3325	403720 733433	5	-115				-63					
N 3327	404033 734312	25	-545				-67	-432			N5145	
N 3355	404100 732704	103	-1065				17	-604	-775	-1035		
N 3443	404015 734345	124	-347				-32	-136	-256	-339	N7446	
N 3444	404450 733441	263	-197				158					20FT -47
N 3448	403511 734150	7	-1243	-83			-123	-715	-990			
N 3456	404320 733325	77	-552				17					
N 3465	404350 733331	98	-492				10				N7446	
N 3474	404470 733440	244	-395				107	-325			N7445	
N 3475	404490 733445	208	-279				44					20FT -29
N 3479	404117 732944	38	-42				-31					
N 3484	404520 733514	106	-59				77				N8543	
N 3488	404450 733104	117	-234				29					
N 3494	404000 733147	97	-553				2				N8321	
N 3519	404300 734148	19	-600				-33	-519			N3781	
N 3520	404112 733932	38	-445				-32					
N 3521	404820 734148	49	-357				-154	-169	-272			
N 3523	404814 734112	201	-383				-138	-199	-336			20FT -34
N 3529	403520 733932	10	-96				-94				N8741	
N 3569	404751 733845	181	-221				93					20FT -22
N 3581	403741 733912	8	-49	-48								

N 3603	4842480734021	75	-458			-31	-427			20FT	-17
N 3605	4841530734102	48	-537			-44	-476				
N 3619	4843460733047	88	-332			12					
N 3636	4842090733735	50	-386			-13		N3700			
N 3649	4844460733704	107	-197			23					
						-38					
N 3668	4841580733729	55	-511			-15	-342				
N 3672	4844590734021	105	-378			-1					
N 3685	4842240733742	55	-95			38				20FT	-38
N 3700	4844480733705	108	33			-39					
N 3704	4841300733831	55	-145							20FT	-16,-49
N 3705	483824 734159	24	-166	-49	-136	-150		N3720			
N 3719	4841120734041	33	-553			PRES	-487				
N 3720	4841120734041	35	-551			-63	-486				
N 3721	4846440733548	48	-61			-8					
N 3732	4846440733839	140	-310			28					
						32				20FT	-16
N 3733	4846280733831	141	-314			-138				20FT	-32
N 3734	483711 734443	12	-158			-59					
N 3741	4839130734020	20	-102			-125		N5708			
N 3742	4848420734044	140	-125			2					
N 3752	4848230733885	211	-52								
						19					
N 3758	4844360733718	110	10			-16	-520	N3851			
N 3781	4848360734145	19	-581			58					
N 3801	4847280734355	85	-108			100					
N 3838	4847590733115	195	32			17					
N 3851	484727 734355	82	-185					N8941			
						39		N3874			
N 3857	4843530732918	91	-681			123				20FT	-23
N 3860	4847450733859	183	-262			-203	-545			20FT	-36
N 3861	483751 734401	5	-616	-59	-133	-158	-646	N8701		20FT	-38
N 3862	483821 734418	8	-787	-111	-123	-149					
N 3863	4835170734387	11	-286	-79	-115			N8581		20FT	-19,-37
						-286	-576			20FT	-28
N 3864	483827 734258	4	-632	-65	-133	-56	-736			20FT	-22,-33
N 3865	4837350733748	4	-846			-188				20FT	-38,-51
N 3866	483816 734142	8	-448	-88	-138	-144	-513				
N 3867	483912 734320	8	-543	-61	-78	108					
N 3874	4847450733859	183	-152					N8941			
						38		N3953			
N 3876	4843520732911	98	-316			-5					
N 3877	4846280733237	152	-483			12	-435				
N 3878	4846240733233	158	-456			-28					
N 3881	4843280734025	88	-414				-288				
N 3888	4849480734128	188	-294								

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL									
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	MONTAUK GREENSAND	MAGOTHY AQUIFER	RARITAN CONFINING UNIT	LLOYD AQUIFER	BEDROCK	LOCATED NEAR WELL	REMARKS	
N 3892	405233 0733724	145	-300					-171	-234		N5261		
N 3894	404659 0733417	30	-385				-27					20FT	-10
N 3895	404119 0733231	40	-463				-51				N8976		
N 3905	404544 734151	134	-636				41	-254	-431	-611	N4243		
N 3926	403725 0734304	14	-101	-55								20FT	-19
N 3937	403957 0734017	25	-652				-29	-592					
N 3953	404629 0733237	152	-362				23						
N 3982	403158 0733342	20	-399					-149	-311				
N 4077	404324 734139	85	-453				PRES	-351					
N 4095	404330 0732907	150	-377				76						
N 4097	404310 0732939	158	-312				112				N8598		
N 4120	404430 0734104	35	-423				-40					20FT	-25
N 4128	404730 0734140	137	-43				18						
N 4133	404000 0733034	192	-253				-2					20FT	-33
N 4149	403950 0733242	5	-873				-44	-784					
N 4150	403843 0733407	7	-819				-44	-745				20FT	-29
N 4173	404526 734159	130	-130				12						
N 4206	404524 0733632	166	-254				47						
N 4207	404517 0734154	120	-125				18						
N 4215	404330 0733759	132	28				36						
N 4223	404550 0734034	192	-318				-148	-194	-311				
N 4243	404541 734152	132	-128				41						
N 4245	404740 0733211	222	-349				72						
N 4246	404820 0733128	200	-258				40						
N 4265	404750 0733724	215	-275				19						
N 4266	404752 734403	57	-419					-155	-233	-348			
N 4327	404210 0733923	127	-303				36	-303					
N 4332	404750 0733940	189	-21				113						
N 4334	404110 0733832	65	-96				-13						
N 4376	405450 0733112	58	-309					-110	-242				

N 4382	4845228733437	114	-186				54					
N 4383	4845278733354	124	-12				82				N9862	
N 4388	4848468734483	28	-117				-26					
N 4398	4845148734121	124	-177				9				N7445	
N 4480	4851548732958	38	-364				-177	-268				
N 4481	4841538732622	37	-884				-57				N9173	
N 4485	483515 734385	9	-1188	-84	-128		-141	-709	-865		N6781	20FT -35,
N 4411	4839208734849	17	-551				-58					
N 4425	4842598733715	68	-315				0					
N 4432	4851438733821	28	-324					-128	-272		N8549	
N 4448	4851358733829	16	-388					-119	-234			
N 4461	4848518732948	25	-817	PRES			-58				N8837	
N 4462	4858168733849	69	-282					PRES				
N 4512	4846588734188	35	-487				-28	-478				
N 4623	4847228733948	257	-246				67	-244				
N 4633	4847218733822	176	-132				19					
N 4714	483882 734444		-228		-158							VEATCH 272
N 4756	4842868733452	61	-847				4	-575	-755			
N 4772	4844378733743	109	-129				38			-353		
N 4859	4858188734142	38	-369									
N 4875	4837498734238	25	-123	-67			-112					20FT -15
N 5007	4845528733428	119	-148				99				N7353	
N 5058	4848488733467	238	-17				178					
N 5071	4852138733655	143	-99				48					
N 5074	4847888734358	81	-39				-39					
N 5078	484238 734283	71	-392				-31	-392				
N 5079	4837428734852	15	-138	-97			-122					
N 5099	484847 734235	189	-245				-58	-199				
N 5118	484629 734213	82	-324				-63	-188				
N 5121	4839588734183	26	-521				-62				N8251	
N 5129	4838688733838	9	-1894	-52		PRES	-98	-998				
N 5135	4847328734384	135	-29				99					
N 5145	4848318734318	38	-474				-57					
N 5149	4845568733845	147	-45				39					
N 5153	4839428733844	25	-338				-25					
N 5187	4848418733438	35	-579				-18					
N 5188	4853588733124	22	-353					-178	-338			
N 5193	4839298733821	27	-528	PRES			PRES				N9792	
N 5194	4839238733922	16	-584				PRES					
N 5201	4849258733817	48	-461					-292	-376			

N 5698	4839456733415	28	-545			-35			
N 5705	4845398732652	145	-368			95			
N 5708	4848248733886	211	-32			-3			
N 5710	4845598734155	179	-211			59			20FT -34,-48
N 5731	483944 734319	15	-87			-58			
N 5762	4851298733615	145	-165			-19	-135		
N 5768	4835218733739	5	-845	-88		-127			20FT -30
N 5777	4839498732938	5	-78			-82			
N 5851	4847148733428	218	41			98			
N 5852	4848698733748	235	-282			58	-265		
N 5878	4848598734115	188	-195			-118	-168		
N 5883	4848298733814	208	-7			6			
N 5884	484758 734258	68	-168			36	-95		
N 5901	4847318733185	179	31			183			20FT -28
N 5906	4838338733555	18	-181			-42			
N 5947	4848468733908	129	-375			88	-282		
N 5984	4852118733718	138	-118			25	-182		
N 6034	4847438734022	218	-97			-17		N6395	
N 6035	4847458734012	198	-98			81			
N 6046	4844178733551	181	-255			39			
N 6062	4839138732928	6	-82	-48		-58			
N 6073	4845118734128	128	14			14		N6677	
N 6076	4848598732911	158	-538			88	-512		
N 6077	4848498732918	158	-534			86	-515		
N 6092	4849128732751	241	-398			191			
N 6093	4849988732751	248	-388			141			
N 6119	4848898733929	123	-58			41			
N 6148	4842168732733	58	-516			-48			20FT -23
N 6149	4842128732821	47	-678			-48			
N 6158	4842458732983	59	-645			-28			
N 6198	4847878733853	177	-465			-41	-458	N6191	
N 6191	4847878733849	188	-498			-1	-482		
N 6192	4845168733188	127	-538			25		N9188	
N 6193	4845178733185	138	-687			28	-574	N9188	
N 6282	4845498733385	132	-132			37			
N 6285	4844258733813	187	-181			4		N7849	
N 6224	4854398733848	38	-322				-115 -278 -318	N9464	
N 6282	4851258734287	182	-348				-228		
N 6289	4851228733517	162	-228				-258	N6578	
N 6312	4854368733128	38	-382						

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,148 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL									
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	MONTAUK GREENSAND	MAGOTHY AQUIFER	RARITAN CONFINING UNIT	LLOYD AQUIFER	BEDROCK	LOCATED NEAR WELL	REMARKS	
N 5227	4055926733533	10	-1270	-39			-87	-899	-1089		N6858	20FT	-39
N 5228	4046290733961	158	-176				-35						
N 5233	4035220733621	12	-537	-49			-78					20FT	-28
N 5260	4041330733834	55	-463				-41					20FT	-27
N 5261	4052330733722	145	-157					-105					
N 5292	4038960733453	5	-87				-46					20FT	-39
N 5301	4044200733152	107	-397				27						
N 5302	4042460733143	65	-426				-49						
N 5303	4042530733000	60	-455				-7						
N 5304	4042250733043	55	-448				-35						
N 5308	4035190733020	8	-1240	-102			-142	-848	-1020				
N 5335	4047130733145	170	26				112						
N 5336	4044410733207	114	-556				21	-542					
N 5357	4049370734420	20	-263							-263			
N 5360	4045200733015	130	-20				44						
N 5484	4044100733044	90	-499				30	-488					
N 5485	4044230733055	92	-465				21	-459					
N 5486	4044150733055	89	-934				39	-470	-630				
N 5624	4033260734429	5	-139	-92	-126								
N 5628	4047200734005	257	-250				62	-238					
N 5630	4049420734144	65	-371						-255	-365			
N 5635	4048180734141	250	-185				49						
N 5578	404722 734348	95	-171				29	-118					
N 5596	4044530733725	100	-362				20						
N 5603	4045170734023	114	-338				55	-383					
N 5621	4048570734115	100	-100				-117	-169			N5878		
N 5654	4044510733520	102	-233				54						
N 5655	4045410733335	130	-130				44						
N 5677	4048410733047	210	-211				139						
N 5695	4039220733543	24	-505				-34						

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,148 WELLS ON LONG ISLAND, NEW YORK

WELL IDENT-ICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL							LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	MONTAUK GREENSAND	MAGOTHY AQUIFER	RARITAN CONFINING UNIT	LLOYD AQUIFER	BEDROCK		
N 6315	404526073362	184	-251				41					
N 6334	4044540734184	128	-80				24					
N 6354	4037129733000	10	-104	-57		-68	-94					
N 6355	4036446733305	5	-125	-52			-65					
N 6376	4046330732706	200	-47				72					
N 6383	40412307328S2	31	-653				-31				N8442	
N 6394	4047460734010	190	-27				116				N8395	
N 6395	4047470734010	190	-10				115					
N 6410	4051330733010	15	-200					-150	-230			
N 6435	4053200733120	50	-300					-154	-307			
N 6437	4042500733021	65	-220				-14					
N 6442	4041230732053	31	-601				-42					
N 6444	4050310733535	170	-07				00					
N 6450	4035330734011	10	-1321				-07	-015	-050			
N 6456	4030420734245	15	-09				-40					
N 6467	403010 734331	4	-604	-55	-132		-191	-571				20FT -21,-30
N 6468	403040 734330	5	-609	-52	-134		-230	-530				20FT -29,-33
N 6469	403010 734313	6	-597	-60	-131		-150	-509				20FT -7,-20
N 6510	403042 734333	10	-453	-00	-155		-154				N8610	
N 6549	4051440733024	32	-409					-177	-223	-404		
N 6570	4054330733122	20	-311					-150	-200			
N 6590	4048200732037	160	-542				100	-524				
N 6591	403027 734250	0	-612	-01	-131		-207	-579				20FT -24,-40
N 6610	403041 734331	9	-235	-79	-100		-121					
N 6623	4039070733532	20	-110				-52					
N 6631	4043440732041	07	-500				23				N8004	
N 6636	4043190732050	60	-140				-30					
N 6644	4044100732710	00	-140				14					
N 6651	4047540733157	225	-305				02	-305				
N 6655	4045340733244	122	-114				57				N8000	

N 6857	4848318732553	5	-496	-53		-84	-179				26FT	-46
N 6860	4830188732639	15	-73				-25				26FT	-22
N 6875	4853338732832	7	-458						-431			
N 6891	4846488732857	145	42				42					
N 6781	486517 734388	11	-648	-77	-133		-149	-716				
N 6785	483718 734159	8	-737	-68	-125		-155	-628			26FT	-19,-33
N 6721	4846578738819	148	29				38					
N 6741	4847518732845	169	-243				67				26FT	-21
N 6757	4838558738248	5	-66	-46			-51					
N 6791	4837288738888	5	-73	-56								
N 6886	4858288738618	154	-169				69					
N 6818	4859368734389	10	-228				-89					
N 6817	4859388738817	28	-559	-36			-84			N9792		
N 6819	4845378738335	139	-132				34					
N 6834	4848388738838	26	-678				-48			N8866	26FT	-26
N 6842	4844428738818	184	-54				48					
N 6849	4844458738326	110	-2				2					
N 6858	4858388738532	7	-1843	-46			-87	-988				
N 6865	4844338734825	87	-214				11			N8918		
N 6868	4848388738835	26	-888				PRES					
N 6873	4853318738114	88	-388					-178	-339			
N 6893	4848488738548	48	-524				-15					
N 6904	4843388738848	91	-882				18			N7876		
N 6907	4848388738641	138	4				55			N7936		
N 6915	4844818738832	98	-498				38			N8916		
N 6918	4843588738831	91	-522				48					
N 6918	4844338734827	87	-216				2					
N 6925	484758 734448	11	-274					-159	-198			
N 6928	4838858738963	8	-852	?			-85	-686	-841	N7889		
N 6945	4845478734811	154	-368				81	-343				
N 6966	4845578732785	178	-484				38			N8595		
N 6985	4837578734839	5	-132	-96	-163						26FT	-29
N 6972	4847888734488	78	-48				-28				26FT	-35
N 6992	4848518732721	24	-87	-44			-89					
N 6996	4845388738848	132	12				21					
N 7822	4842888738588	68	-4				-4					
N 7838	4846378738386	168	-378				-3					
N 7845	4847288738423	241	98				91					
N 7847	4851538738328	223	-41				83					
N 7853	4848288734858	209	-77				72					
N 7876	4843388738848	91	-583				28					
N 7887	4847668734337	98	-185				-13					
N 7184	4848328738722	158	-314				68	-272			26FT	-31
N 7114	4837538738738	9	-193				-39					
N 7115	4858288738317	285	-89				-18					

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,148 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL							LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	MONTAUK GREENSAND	MAGOTHY AQUIFER	RARITAN CONFINING UNIT	LLOYD AQUIFER	BEDROCK		
N 7117	4842220734047	60	-431				-26					
N 7124	4843510732647	70	-85				-22					
N 7126	4840520734007	193	-636				113	-275	-429	-628	N7892	
N 7133	4837490734116	9	-141	-88			-126					
N 7152	4854330733446	14	-395					-239	-266	-369		
N 7160	4841560733448	60	-639				-3	-582				
N 7161	4838560733925	10	-696				-66	-688				
N 7195	4844410733850	92	-238				58					
N 7290	4843830733714	61	-526				-4					
N 7334	4845140734121	120	-362				15	-348			N7445	
N 7336	4846510733647	144	21				41					
N 7353	4845520733410	120	-295				60					
N 7377	4843130732750	65	-701				-14					
N 7399	4846520734220	120	-74				-64				N8456	
N 7407	4840020733332	24	-624				PRES				N8263	
N 7414	4840540732613	22	-597				-63					
N 7419	4849050732852	243	-82				78					
N 7420	4840830732806	283	18				153					
N 7430	4840100734252	20	-538				-57					
N 7433	4840050733429	25	-78				-21					
N 7438	4844200732743	127	-523				82		-179			
N 7439	4852590733850	22	-198				18	PRES				
N 7445	484515 734122	120	-333				85					
N 7446	4848480733443	222	-276				71					
N 7458	4840550733801	176	42									
N 7469	4859220733964	20	-258				-56					
N 7482	4841980734329	35	-425				-48					
N 7486	4854120733112	25	-335					-174	-314			
N 7487	4842120734239	50	-78				-44					
N 7506	4844180733454	90	-384				52					

N 7503	4843388732708	60	-685		-28				N7516
N 7510	4854448733131	19	-310			-266	-265		
N 7512	4845388734103	123	-257		28				
N 7513	4846528733727	154	-321		4				
N 7516	4843878732705	63	-526		PRES				
N 7518	4845338732937	133	-327		72				
N 7521	4839488733928	13	-559	-47	-65				
N 7522	4848918733913	25	-612		-55	-588			
N 7523	4843888733926	76	-688		16				
N 7524	4844258733905	166	-174		33				N7849
N 7525	4854858733112	32	-385			-158	-358		
N 7526	4847848732883	210	-484		90				
N 7529	4841558733892	45	-27		-17				
N 7546	4854188733248	11	-353			-318	-332		
N 7547	4854398733528	9	-313			-261	-291		
N 7548	4848878734258	28	-487		-61				
N 7549	4847388733531	198	-386		155				
N 7551	4846588733948	162	-443		79	-248	-418		
N 7552	4846498733944	143	-455		101	-254			
N 7553	4846528733948	153	-385		111	-261			
N 7554	4847858733949	198	-318		99	-253			
N 7560	4845878734282	158	-92		38				N8267
N 7562	4846348733112	188	-523		-18	-494			N8249
N 7570	4854248733488	125	-397			-251	-286		N7628
N 7581	4845488733814	123	38		31				
N 7593	4858458732838	253	-228		88				
N 7613	484814 734518	38	-197				-147		
N 7614	4851458733815	32	-381			-148	-229		
N 7628	4854248733488	125	-355			-251	-281		
N 7644	4854218733852	19	-381			-158	-277		
N 7651	4846118734818	162	-411		28	-284			N7668
N 7663	4839518732724	6	-171	-44	-54				
N 7668	4846118734818	162	-363		28	-284			
N 7719	4854428733429	28	-388					-348	
N 7728	4842378734887	78	-493		-38				
N 7731	4846128734888	167	18		78				
N 7732	4845178733339	121	13		73				
N 7764	4842218733537	68	-186		-5				
N 7776	484827 734454	43	-267				-178		N7773
N 7772	4858128733182	258	-318		-76				

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,148 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL									
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	MONTAUK GREENSAND	MAGOTHY AQUIFER	RARITAN CONFINING UNIT	LLOYD AQUIFER	BEDROCK	LOCATED NEAR WELL	REMARKS	
N 7773	4058100733050	230	-335				-136						
N 7776	4053370733040	5	-1233				-123	-817	-980				
N 7781	4047510733220	217	-333				91						
N 7782	4051420733714	95	-133				24	-133					
N 7785	4045260733534	180	-296				54						
N 7795	4048230733709	48	-720				-23	-665					
N 7796	4039490733417	11	-689				-51						
N 7839	4051110733258	110	-79				83						
N 7849	4044230733806	106	-145				23						
N 7852	4044110732616	75	-540				-23						
N 7854	4048350734035	35	-637				-18	-587					
N 7855	4048480734036	37	-568				-16						
N 7857	4050590733841	195	-432					-171	-275	-432			
N 7858	4048110733321	218	-157				33						
N 7873	4048110733633	253	-282				135						
N 7884	4038030733953	7	-738	-48			-54	-685			N7889		
N 7885	4038030733954	7	-725	-47			-54				N7889		
N 7886	4038030733954	7	-595	-41			-54				N7889		
N 7887	4038030733954	7	-538	-43			-58				N7889		
N 7889	4038020733954	7	-595	-45			-55						
N 7892	4048510734009	266	-255				101	-252					
N 7936	4048360733841	138	-5				78						
N 7957	4044190733531	96	-527				38	-488					
N 7993	4047160733711	161	6				68						
N 8004	4043450732940	85	-603				38	-854					
N 8007	4045430733549	128	-458				64	-458					
N 8008	4039130733211	10	-383	-42			-51						
N 8010	4047390733921	225	-228				131	-224				20FT	-30
N 8031	4048390733115	25	-498				-39						
N 8037	4043590733148	97	-587				1				N8321		

N 8038	4845458734255	210	-95		104							
N 8043	4847548732831	222	-499		132	-484						
N 8048	4851528733819	60	-310			-184	-248					
N 8095	4849148733924	35	-365			-258	-331		N8608			
N 8096	4849178733924	27	-383			-258	-347		N8608			
N 8109	4838448734238	5	-148	-52	-147						20FT	-28
N 8123	4856498733835	263	-63		41							
N 8162	4839848733134	10	-144	-42	-51						20FT	-35
N 8163	4846858734001	156	5		81							
N 8171	4838588733338	10	-373		-40							
N 8181	4846188733545	141	-99		12							
N 8186	4837188733343	12	-150	-58	-63						20FT	-33
N 8195	4838348734187	20	-683		-52	-585					20FT	-31
N 8196	4839528733816	24	-682		-36	-636						
N 8211	4845288734129	120	-185		29				N8568			
N 8214	4841588732628	37	-663		-38				N9173			
N 8216	4848988733718	30	-635		-11							
N 8217	4848848733718	38	-669		-17	-646						
N 8221	484922 734588	75	-215				-155					
N 8233	4835188733828	8	-1223	PRES	-146	-893	-1042					
N 8248	4845258733825	120	-398		15	-398						
N 8249	4846328733111	163	-332		-27							
N 8258	4841898733718	58	-643		-28	-551						
N 8251	4839598734184	25	-668		-49	-538					20FT	-35
N 8253	4848838733334	25	-675		-48						20FT	-23
N 8255	4848588734224	185	-195		-59	-185			N8456			
N 8267	4845858734285	125	-168		38							
N 8277	4844198733838	183	-258		7							
N 8319	4839498734325	15	-165		-35							
N 8321	4844898733147	97	-577		PRES							
N 8328	4851188733729	53	-454				-384		N8327			
N 8327	4851138733728	53	-389				-384					
N 8342	484642 734485	18	-425		-81	-179	-277	-421	N9118			
N 8343	4852168733723	138	-282		-4	-96	-239		N8394			
N 8344	4839318734318	18	-58	-48								
N 8354	4835228733788	5	-1278	-61	-87	-866	-1095					
N 8355	4848298733159	268	-337		138							
N 8358	4845388734144	119	-338		23	-252			N8373			
N 8363	4842178732984	58	-544		-38				N8665			
N 8369	4846328733811	168	-35		71							

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENT-ICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL							LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARD-INERS CLAY	JAMECO GRAVEL	MON GREEN SAND	MAGOTHY AQUIFER	RARIT CONF UNIT	LLOYD AQUIFER	BED-ROCK		
N 8372	4045290734146	119	-229				6				N8373	
N 8373	4045290734146	119	-231				16					
N 8375	404654 734223	110	-454				-66	-174	-325		N8456	
N 8390	4045529734216	45	-38				-25					
N 8394	4052170733721	138	-455				11	-105	-251	-444		
N 8409	4044200733939	96	-309				-8					
N 8413	4047500734253	89	-96				-24	-96				
N 8414	4035500733827	7	-1073	-58		-85	-113	-993			N9338	
N 8415	4042200732933	58	-666				-32					
N 8423	4043150733436	76	-16				58					
N 8431	4048540734357	68	-28				-26					
N 8432	4048570733521	185	-95				102					
N 8455	4049400734446	55	-224							-205		
N 8456	404656 734226	105	-519				-73	-182	-342	-518		
N 8457	4044560733607	105	-335				35					
N 8466	4038030734142	11	-463	-69			-129					20FT -20
N 8472	4045310733332	126	-70				36					
N 8477	4047520733953	188	-565				112	-252	-398	-558		
N 8480	4042290732934	58	-661				-32				N9338	
N 8481	4037570733817	8	-72				-47					
N 8482	4038420733808	18	-66				-52					20FT -17
N 8487	4041260733852	35	-35				-17					
N 8497	4045190733429	115	-489				66	-445				
N 8499	4045300734127	148	-130				23					
N 8514	4039000732929	5	-245	-45			-61					
N 8516	4045310734126	138	-125				38				N8568	
N 8520	4046510732663	21	-913				-64	-966			N8683	
N 8543	4045280733514	108	-54				66					
N 8557	4036220734108	9	-1286	-71			-127	-772	-971			
N 8558	4046310733832	142	-373				7	-351				

N 8584	4846288734124	140	-172		42				
N 8585	4845316734126	139	-139		35				N8568
N 8586	4845316734126	139	-129		36				N8568
N 8587	4845316734126	139	-126		38				N8568
N 8588	4845316734126	139	-111		34				
N 8589	484748873395S	105	-558		125	-241	-393		
N 8578	4844588733834	112	-439		-2				
N 8583	4848158732948	194	17		115				N8898
N 8595	4845548732783	182	-439		52				
N 8591	4848858734454	184	-238		52				
N 8603	4848518732883	22	-871		PRES				
N 8598	4849178733924	27	-397			-273	-347		
N 8824	4858118733948	15	-382			-331	-348		
N 8842	4847278733456	243	-157		57				
N 8857	4848258733647	29	-617		-21				
N 8658	4848188733433	325	-345		248	-313			
N 8884	4842178732984	56	-525		-38				N8885
N 8885	4842178732982	57	-553		-43				
N 8868	4845418732858	141	-352		96				
N 8872	4841338733119	35	-728		-15				
N 8878	4848888734124	183	-412		188	-271			
N 8881	4849538733382	288	-178		78				
N 8888	4851348733848	25	-322			-185	-228		N8788
N 8789	4851328733845	22	-298			-151	-218		
N 8713	4849288733733	168	-244		-22	-235			
N 8781	4848428734844	148	-134		-131				
N 8787	4845328732849	124	-521		63				N8788
N 8788	4845328732848	124	-559		61				
N 8776	4854238733353	98	-381			-258	-294		
N 8788	4848588734123	78	-387		-98	-161	-288		
N 8798	4845398733742	111	-119		21				
N 8881	4845278734222	147	-133		41				N8883
N 8883	4845258734225	146	-132		48				
N 8885	4853238733131	63	-394			-158	-327		
N 8887	4845438733248	118	-82		25				
N 8818	4842118734856	55	-447		-29	-437			
N 8821	484533 734154	133	-187		18				N8848
N 8828	4842168733718	68	-8		-2				
N 8838	4841488733747	48	-52		-24				
N 8837	4848528732948	28	-881	-45	-84			28FT	-32

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL									
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	MONTAUK GREEN SAND	MAGOTHY AQUIFER	RARITAN CONFINING UNIT	LLOYD AQUIFER	BEDROCK	LOCATED NEAR WELL	REMARKS	
N 8840	404532 734151	122	-110				22						
N 8842	4044308732963	111	-543				6					20FT	-29
N 8858	4035508734341	10	-94	-88									
N 8873	4039158732708	7	-200	-54			-74						
N 8880	4045348733244	122	-125				52						
N 8881	4048248733742	40	-31				-5						
N 8885	4047408733000	100	-102				100						
N 8890	4040308734309	30	-67				-58						
N 8890	4049418733845	10	-205				-134	-200					
N 8835	4039458734258	15	-851				-52						
N 8941	4043538732910	91	-720				19	-882					
N 8958	4045008733338	115	-477				20						
N 8962	4054218733548	6	-422						-368	-422			
N 8964	404635 734356	47	-188				-143	-173					
N 8976	4041108733231	38	-735				-48	-864					
N 8988	4039288733841	28	-84	-38			-85						
N 8994	4051538734206	21	-207							-286			
N 8995	4053578733109	41	-364					-148	-346				
N 9019	4048538733959	46	-365				-156	-223	-328				
N 9024	4044448733712	94	24				48				N9827		
N 9025	4044448733712	94	32				32				N9827		
N 9026	4044568733712	94	24				31				N9827		
N 9027	4044568733712	94	34				36						
N 9062	4045278733354	124	-19				79						
N 9066	4052048733834	143	-598				5	-121	-282	-461	N9211		
N 9084	404357 733317	98	-47				16				N9292		
N 9085	404415 733398	102	8				44				N9286		
N 9110	404040 734418	15	-371				-98	-174	-281				
N 9151	404224 734238	58	-386				-24	-383					
N 9170	4047548733039	184	-369				48						

N 9173	4841E48732628	38	-848		-34	-814				26FT	-34
N 9178	4842868733500	82	-584		-5	-583					
N 9180	4845178733102	138	-570		48	-565					
N 9182	484497 733315	181	-96		28				N9284		
N 9191	484484 733304	188	-96		48						
N 9196	484484 733253	99	-188		36				N9367		
N 9202	484367 733316	98	-3		25						
N 9203	484402 733315	188	-1		14						
N 9204	484407 733314	181	0		39						
N 9205	484412 733313	183	2		18				N9368		
N 9208	484415 733307	184	-33		39						
N 9210	4852028733633	142	-138		2	-114			N9211		
N 9211	4852868733634	142	-127		0	-126					
N 9212	484453 733246	117	-713		47	-581					
N 9219	484353 733319	96	0		28						
N 9223	484348 733329	93	-6		28						
N 9234	4844388733318	186	-188		41						
N 9247	484345 733243	93	-3		33						
N 9252	484391 733247	89	-187		38						
N 9268	484735 734248	12	-431			-144	-243	-419			
N 9318	4841588733512	85	-487		-2						
N 9334	4851288733785	143	-498		0	-152	-294	-481			
N 9338	4842288732985	58	-588		-22						
N 9368	484418 733312	182	-184		32						
N 9367	484481 733248	181	-5		35						
N 9463	4848818733158	141	-497		-64	-469					
N 9464	4854388733845	22	-388			-165	-288				
N 9488	4846288733112	181	-477		-111	-477					
N 9488	4849128733235	225	27		138						
N 9514	4841318733114	38	-858		-45						
N 9518	4851448733135	98	-488				-447				
N 9521	4844118733818	98	-548		28	-469					
N 9523	4839278734111	28	-118		-77						
N 9532	4839488734218	18	-138	-78	-88						
N 9533	4837528734123	18	-135	-84	-125						
N 9534	4839278733915	28	-85		-44						
N 9535	4837318733817	5	-188	-45	-53					28FT	-31
N 9538	4837478733718	5	-78		-88					28FT	-25
N 9537	4839388733711	28	-48		-32						
N 9538	4839258733885	18	-135		-34					28FT	-18

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL								LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	MONTAUK GREENSAND	MAGOTHY AQUIFER	RARITAN CONFINING UNIT	LLOYD AQUIFER	BEDROCK			
N 9639	483742 0733835	6	-54				-48						20FT -30
N 9641	484138 0733439	28	-77				-12						
N 9648	483900 0733400	15	-110				-75						20FT -25
N 9651	483808 0733343	10	-85				-52						20FT -38
N 9652	484011 0733057	15	-80	-49			-57						20FT -35
N 9653	483828 0733032	5	-80	-39			-81						
N 9654	484105 0732742	20	-80	-42			-52						20FT -30
N 9656	484030 0732933	20	-135				-45						20FT -35
N 9665	484124 0732915	40	-60				-48						
N 9667	483946 0734029	25	-115	-43			-63						
N 9676	484051 0732633	15	-60	-45			-58						
N 9677	484159 0732707	25	-55				-45						20FT -27
N 9679	484218 0734019	55	-130				-25						
N 9691	484524 0732926	121	-579				83	-568					
N 9693	484109 0733120	5	-385					-135	-295				
N 9695	483809 0733250	28	-447					-137	-366				
N 9683	483956 0733517	25	-48				-25						
N 9684	484001 0733306	28	-58				-48						20FT -25
N 9685	483958 0733132	15	-65				-49						20FT -25
N 9686	484150 0732946	194	106				124						
N 9697	484718 0732738	108	51				104						
N 9699	485124 0732926	67	20				33						
N 9700	485426 0733119	12	-375					-143	-360				
N 9702	483938 0733829	31	-531	-37			-102						20FT -23
N 9669	484838 0734042	115	-488					PRES	PRES	-486			
N 9646	484412 733518	85	-538				47	-518					
N 9665	484413 0733707	92	37				48						
N 9977		173	-43				-43						
N 9978		173	-73				-41						
N10619	484407 733704	87	-213				27						

N10020	484406	733857	83	-287			31						
N10033	484259	733806	74	-544			10	-584			N10034		
N10034	484258	733806	74	-526			4	-584					
N10038	484404	733346	95	-553			-20						
N10039	484354	733343	93	-571			-43						
N10040	484344	733356	90	-554			-61						
N10041	484336	733509	77	-571			27	-518					
N10042	484338	733538	83	-588			35	-541					
N10043	484418	733616	78	-118			10						
N10100	484844	734408	35	-278						-255			
S 3	484583	732548	97	-191			62						
S 12	4837136732367		7	-306	PRES		-83					26FT	-38
S 13	484218	732159	30	-348	PRES		-54						
S 15	4842246732237		40	-61	-38								
S 16	4841606732525		20	-109	-52		-89						
S 17	4843426732145		50	-75	-43		-47						
S 18	4845126732142		56	-344			-18						
S 19	4847506731942		130	-73			-54						
S 24	4847526732013		150	18			131						
S 34	485536	732241	5	-1645				PRES	PRES	-597			
S 37	4843156731888		33	-787			-65						
S 38	484318	731702	32	-168			-63						
S 40	483834	730941	15	-300	-75	-115	-384						
S 42	4847316731647		120	-888			-38	-706	-858				
S 45	484948	731652	160	31									
S 48	485329	731843	123	-617				-488	-572		549		
S 49	485327	731843	130	-622				-395	-596				
S 53	485411	731532	62	-132									
S 58	4844556731387		38	-438	-71		-88						
S 64	485136	731251	20	-185									
S 68	485355	731436	66	-348			-175						
S 72	485342	731433	121	-379			-154						
S 74	4842006730955		10	-181	-97								
S 78	4844156732031		41	-88			-58						
S 88	484501	730529	35	-96									SPEAR(1912)
S 88	4843506732047		40	-76			-43						
S 92	4845526730120		15	-165	PRES	PRES	-125						
S 94	484522	730312	35	-83									
S 95	4846316730114		28	-437			-131						
S 96	484954	730148	120	24									

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL								
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	MONTAUK GREENSAND	MAGOTHY AQUIFER	RARITAN CONFINING UNIT	LLOYD AQUIFER	BEDROCK	LOCATED NEAR WELL	REMARKS
S 99	405834 730145	260	5									
S 105	405200 730007	95	-125									
S 106	405201 730200	95	2									
S 107	405337 730022	120	-100									
S 108	405256 730040	80	-110									
S 111	405635 730415	50	-112				20					
S 112	405715 730414	10	-235				-10					
S 114	405705 730358	5	-320				-8					
S 120	404758 725454	35	-895				-136					
S 129	404854 725000	20	-70									
S 135	405850 725034	110	9									
S 145	405538 724207	40	-51									
S 149	405754 724653	120	-40									
S 151	404824 723745	10	-330	PRES		-143	-197					
S 152	404730 723920	5	-265	PRES		-120	-203					
S 153	404720 723959	5	-264	PRES		-125	-203					
S 160	405437 723755	10	-170									
S 164	405423 722400	75	-40									
S 167	405820 722637	20	-600				-135					
S 169	410251 722625	20	-70								S4163	
S 170	410251 722625	5	-163								S4163	
S 178	410630 722235	20	-35									
S 182	405737 721951	130	-20									
S 183	405750 721920	110	-83									
S 184	405912 721743	30	-510				-200				S16668	
S 185	405941 721650	60	-40					-387	-487	-612		
S 189	410745 721600	5	-663									
S 190	405750 721143	50	-26									
S 191	405910 720905	110	-20									
S 197	410509 722130	10	-9									

S	198	410458	722120	26	-4							
S	199	410446	722110	9	-7							
S	200	404848	732600	350	205							
S	236	404334	732352	60	-32							
S	266	405506	732412	10	-330							
S	267	405502	732243	5	-345					-245	-325	
S	291	404458	731430	40	-62							
S	298	404504	731231	28	-13							
S	302	404620	731432	80	28							
S	308	405128	731259	66	-180							
S	317	405301	731147	120	-92							
S	318	405414	731304	10	-136							
S	328	405403	731104	60	-57							
S	351	405423	730904	100	-60				-40			
S	357	405548	730644	86	-172				-18			
S	368	405657	730643	40	-280				-45			
S	368	405814	730524	10	-155							
S	375	4046220730857		25	-115	-74			-106			
S	397	405638	730412	50	-46				10			
S	407	405706	730338	200	-170				-80			
S	421	405652	725354	135	-212							
S	422	405743	725434	20	-74							
S	455	404813	723648	5	-220	-130		-150	-175			
S	458	404847	723627	10	-237	-125		-146	-182			
S	490	410559	722150	16	-674				-260	PRES	PRES	-854
S	492	410822	722114	40	-18							
S	495	405604	721820	30	-270				-125			
S	518	410585	722624	75	-21							
S	527	405748	724300	100	-33							
S	539	405154	730005	90	41							
S	552	405721	724434	105	-8							
S	589	405239	723140	45	-10							
S	614	405346	722311	47	-39							
S	619	405501	724326	30	-137							
S	630	405603	723836	10	-79							
S	644	405839	724038	150	-8							
S	651	404848	732644	310	36				132			
S	657	405302	725855	90	38							
S	660	405007	730525	100	35							
S	670	405443	722616	45	-45							

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENT-ICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL							LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	MGN GREEN SAND	MAGOTHY AQUIFER	RARIT CONF UNIT	LLOYD AQUIFER	BED-ROCK		
S 681	405808 723618	10	-245									
S 716	405612 723856	10	-213									
S 731	404550732348	85	-44				-29					
S 769	404953 732624	140	6									
S 777	405849 730210	240	5									
S 798	405751 724745	105	-55									
S 848	405714 732249	50	-21								S3554	
S 852	405157 731123	135	-8									
S 853	405738 725943	130	-15									
S 911	404904 724945	45	-19									
S 912	405308 731231	90	-328				-110					
S 919	405553 730332	220	-86									
S 927	404858 732559	350	-169				1					
S 933	404943 725513	55	-51								S28383	
S 939	405117 725750	100	14									
S 978	405752 725832	85	-163									
S 1052	4039310732444	5	-92	-55		PRES	-74					
S 1081	405530 732330	50	-50									
S 1101	405718 721250	40	-23									
S 1102	410311 722027	10	-84									
S 1215	405743 724259	95	-19									
S 1250	410005 722142	9	-61									
S 1264	404457 724836	5	-296	PRES		PRES	-278					
S 1296	4049070732935	240	24				90					
S 1318	405127 723817	15	-35								S7569	
S 1331	404551 725617	30	-38								S67974	
S 1341	405412 722328	38	-61								S31037	
S 1378	4037560731313	10	-385	-70		-166	-283					20FT -34
S 1399	405943 720243	20	-319				-266					
S 1407	404941 724706	85	3									

S 1497	485884	730840	10	-247			-172		
S 1531	485208	724945	45	-93					
S 1569	485245	730951	100	28					
S 1592	484708	724825	10	-210	-114	-123	-203		
S 1601	485507	731834	80	-48					
S 1609	485818	724131	100	-21					
S 1610	485749	723931	70	-23					
S 1685	484840	731158	100	-3					
S 1689	485005	730247	160	45					
S 1723	484749	731610	122	-37			-37		
S 1743	484712	724822	10	-219	-82	-120	-200		
S 1777	485716	723947	40	-50					
S 1790	485846	723855	40	-44					
S 1793	484840	732100	320	47			132		
S 1881	484020	732030	200	25			148		
S 1922	485854	724707	115	-32					
S 1934	483650	732455	10	-294	-78	-116	-219		
S 1938	485741	724317	100	-33					
S 1942	485119	732003	205	-240					
S 1992	485821	724435	85	-15					
S 1929	485723	724446	110	-45					
S 1951	485208	732059	220	-288					
S 2010	485819	724242	140	-22					
S 2018	485856	725533	150	38					
S 2181	485745	730848	60	-288					
S 2314	484050	732118	80	-488			66		
S 2405	485722	721238	45	-43					S2570
S 2406	485131	731114	100	-43					
S 2424	484630	732214	110	-48			98		
S 2426	485355	731155	80	-57					
S 2459	484100	731925	10	-121	-54		-62		
S 2466	485338	731305	60	-93					
S 2485	485109	725138	69	-6					
S 2536	485431	722347	75	15					
S 2567	485231	731420	148	-8					
S 2569	485711	721307	25	-42					
S 2570	485721	721238	45	-45					
S 2598	485755	724712	127	-19					
S 2638	484044	732143	10	-178	-49		-120		S14940
S 2650	485635	730129	165	-43					

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,148 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL							LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	MONTAUK GREEN SAND	MAGOTHY AQUIFER	RARITAN CONFINING UNIT	LLOYD AQUIFER	BEDROCK		
S 2653	404955 732156	190	66									
S 2654	405759 724205	98	-42									
S 2678	405940 723330	12	-47									
S 2712	410449 722650	53	-15									
S 2730	404757 732155	200	-135									
S 2747	405641 725804	140	50									
S 2752	405417 731215	50	-163								S44378	
S 2978	405322 732114	15	-258								S44378	
S 3012	405322 732114	15	-186								S4163	
S 3045	410251 722625	20	-35									
S 3087	404924 732523	220	35				-182					
S 3123	405919 722609	8	-451				115					
S 3184	404856 732641	240	-34									
S 3243	405116 730520	100	25									
S 3354	405357 731708	125	-108									
S 3369	405142 731302	85	-33									
S 3438	404908 730705	100	-1									
S 3462	405259 730029	165	24									
S 3468	405008 723822	45	-8									
S 3487	405841 723845	130	39									
S 3488	410122 723236	68	-30			-134	-219					
S 3490	404931 723202	8	-354									
S 3504	404423 732534	80	5									
S 3506	404946 723858	48	-62									
S 3513	405148 730318	101	36									
S 3537	405004 724238	43										
S 3539	405121 724156	79	-9									
S 3554	405714 732347	71	-35									
S 3570	405700 724207	80	-80									
S 3585	410619 720614	80	-10									

S 3599	410412	715130	40	-29						
S 3636	404350	725217	10	-367	-105		-128	-268		
S 3697	410722	722107	36	-43						
S 3698	410725	722105	38	-41						
S 3721	405537	724321	60	-30						
S 3722	405614	724035	25	-85						
S 3737	405103	730455	110	47						
S 3761	405328	731706	160	10						
S 3764	405658	723831	42	-12						
S 3765	405634	724015	30	-24						
S 3767	405718	724112	65	-9						
S 3771	404927	732241	240	45				93		
S 3860	405512	730606	99	-15				44		
S 3871	405010	725809	128	41						
S 3875	405554	724550	90	-25						
S 3941	405431	724549	60	-25						
S 3955	405343	730650	123	41						
S 3957	405521	724549	68	-47						
S 3968	405801	723254	14	-38						
S 4048	405743	724342	105	-67						
S 4090	405418	724510	50	-20						
S 4081	405946	723420	40	-77						
S 4085	405529	723822	12	-48						
S 4091	410342	722530	28	-124						
S 4105	405021	730706	92	24						
S 4126	404919	732221	170	-20				75		
S 4134	405534	724018	24	-201				-196		
S 4152	405752	725657	115	-32						
S 4163	410251	722625	20	-25						
S 4184	405032	731616	143	-19						
S 4260	404630	731800	80	-45						S8439
S 4372	405046	730416	10	-90						
S 4466	405452	732024	20	-350					-210 -320	
S 4475	405832	723522	55	-40						
S 4484	410245	722444	15	-36						
S 4512	405836	723547	63	-51						
S 4519	404813	731944	40	-78						
S 4532	405354	731725	150	-200						
S 4533	405527	732947	60	-82						
S 4534	404748	732029	130	10						

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL							LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	MONTAUK GREENSAND	MAGOTHY AQUIFER	RARITAN CONFINING UNIT	LLOYD AQUIFER	BEDROCK		
S 4571	405753 730907	15	-554				-268				S51571	
S 4577	405808 724037	90	-10									
S 4580	410109 722902	25	-30				-267					
S 4583	405120 731721	165	-385				19					
S 4594	404940 732028	200	17									
S 4615	405806 731746	130	-18				33					
S 4656	404605 732408	100	-41									
S 4676	405832 723737	81	-16									
S 4679	404927 724401	20	-74									
S 4725	410122 723022	47	-71									
S 4761	403842 730859	5	-525	-105		-135	-254					
S 4814	405503 724313	35	-116									
S 4827	405143 732154	216	17				95					
S 4828	405020 732206	185	44									
S 4900	405438 731715	130	-99									
S 4945	405259 731335	150	-73									
S 4949	405921 723202	20	-35									
S 4984	405541 732942	60	-110				134					
S 4997	404948 732246	240	48									
S 5049	405254 731306	160										
S 5134	404750 732033	175	15				80					
S 5140	405535 724108	30	-240				-185					
S 5277	410509 722636	70	-29									
S 5368	405623 724030	35	-30									
S 5388	405409 731058	40	-120									
S 5463	405309 730935	162	7									
S 5475	410030 722710	15	-15								S5755	
S 5591	404450 725103	5	-301	-105		-125	-245					
S 5615	405721 721955	119	-46									
S 5619	404625 724856	5	-267			-175	-255					

S 5678	4048380732037	230	47			184				
S 5696	405556 721648	20	-22							
S 5700	405502 724119	25	-98							
S 5716	4046380732158	200	41			51				
S 5719	404949 732310	200	46							
S 5755	404458 725104	5	-301		-125	-245				
S 5834	404002 730638	90	-36							
S 5869	4046130732336	200	9			156				
S 5901	405701 730443	15	-876			-25	-498	-595	-813	
S 5902	405057 730427	120	-418			-36				
S 5915	410156 721016	40	-36							
S 6100	405544 732331	30	-28							
S 6111	410543 720630	60	-43							
S 6187	4043490730269	5	-305	-95	-148	-278				
S 6193	410347 722720	15	-60							
S 6409	405132 725355	117	-1474			-178	-987	-1128	-1448	
S 6410	405517 725408	100	22							
S 6411	405650 725418	198	-11							
S 6413	405308 725531	94	-14							
S 6420	405017 725033	85	-24							
S 6421	405025 724951	90	-1							
S 6422	405451 725005	73	-78							
S 6423	405532 725014	100	9							
S 6425	405136 725227	78	-16							
S 6426	405128 725150	69	-17							
S 6434	405223 725234	85	-1515			-157	-952	-1101	-1391	
S 6456	405218 725311	91	-126			-119				
S 6457	404803 725214	53	-161	-89		-146				
S 6458	405326 725058	61	-201			-169				
S 6459	405122 725101	45	-126			-100				
S 6513	410038 723338	78	-46							
S 6678	4040220731625	1	-123	-61	-88	-120				
S 6771	410418 722200	100	19							
S 6773	405734 724151	85	-9							
S 6949	405541 731940	8	-93							
S 7016	405628 732402	40	-39							
S 7123	410436 722556	40	-44							
S 7148	4040040732037	170	28			127				S45638
S 7211	410215 723036	67	-89							
S 7218	405632 721214	20	-22							

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,148 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL							LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	MONTAUK GREENSAND	MAGOTHY AQUIFER	RARITAN CONFINING UNIT	LLOYD AQUIFER	BEDROCK		
S 7267	410152 723005	18	-25				28					
S 7271	404602 732415	100	-306									
S 7281	410919 721447	13	-9									
S 7285	405831 724138	120	-52									
S 7287	405751 720922	34	-20									
S 7314	404911 732144	215	45				96					
S 7350	403850 730934	10	-412	-90		-120	-300					
S 7352	405747 724027	75	-46									
S 7367	405005 732134	220	57									
S 7499	405620 722037	55	-53									
S 7519	404636 725936	20	-274	-101			-122					
S 7569	405127 723017	15	-16									
S 7570	405840 721145	70	-92								S31653	
S 7650	405741 721903	120	33								S48426	
S 7688	410241 722855	45	-46									
S 7701	405322 722518	22	-38									
S 7878	410024 723147	25	-32									
S 7881	405803 724004	92	-31									
S 7882	405740 723451	37	-89									
S 7908	405740 723959	68	-44									
S 7935	404853 731654	175	29									
S 8025	405712 724231	85	-45									
S 8077	405639 724220	70	-130									
S 8117	404914 731940	200	16				42					
S 8120	405130 732106	220	-155									
S 8121	405134 731858	180	-147									
S 8128	4048330732430	144	-241				82					
S 8133	410225 722921	57	-71									
S 8205	4048400732033	235	32				70					
S 8220	410058 720752	50	-14									

S 8388	405658	723850	48	-46					
S 8439	405646	730418	10	-80					
S 8448	405850	731858	190	-330					
S 8808	410528	722328	5	-183					
S 8867	410112	722044	35	-27					
S 8779	410902	721613	13	-2					
S 8782	410647	732220	22	-3					
S 8935	405387	723235	33						
S 8861	4047380732685		290	44			240		
S 8995	405882	724039	135	-22					
S 8984	405481	724335	50	-45					
S 8943	4046480732152		240	-28			95		
S 8990	405845	729824	48	-56					S77379
S 9011	405197	731643	140	-59					
S 9067	4044240732457		85	-215			-46		
S 9087	405601	730021	160	-95					
S 9211	405824	723831	80	-45					
S 9251	405822	732238	290	21			155		
S 9281	405631	722448	5	-290			-145		
S 9349	404164	730822	10	-330	-148	-150	-310		S27448
S 9478	405889	721814	30	-41					
S 9494	405248	722635	30	-407			-133		
S 9499	405437	722728	55	-135					
S 9582	404969	723758	40	-19					
S 9583	405819	723728	30	-29					
S 9584	405843	723715	35	-26					
S 9654	405564	731842	10	-213					
S 9752	404918	732317	265	41					
S 9771	405845	731615	140	-11					S36791
S 9868	404889	723782	5	-312	-125	-154	-184		
S 9973	404788	724851	10	-265	-118	-157	-265		
S10024	405551	725851	130	-55					
S10091	410231	722954	60	-43					S53326
S10163	410117	723155	57	-50					
S10219	404551	725850	13	-32					
S10238	405527	732854	105	-47					
S10288	405123	732723	225	-161					
S10364	405842	723444	13	-39					
S10365	405925	723589	60	-82					
S10384	405448	724800	55	-254					S35118

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,148 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL							LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	MON GREEN SAND	MAGOTHY AQUIFER	RARIT CONF UNIT	LLOYD AQUIFER	BEDROCK		
S10638	405732 730625	32	-49									
S10648	404816 730611	75	2									
S10832	410922 723158	25	-79									
S10841	404219 731905	19	-43									
S10889	405507 725954	135	-55									
S10724	405730 723332	22	-67									
S10729	404923 724613	62	-39								S12702	
S10733	404943 723723	10	-48									
S10760	404148 732259	35	-50	-46								
S10766	404942 731726	130	-7									
S10830	404612 732445	110	30				-139					
S10876	405842 723310	13	-348				-183					
S10902	405215 731619	140	-290								S28868	
S10914	405546 723909	25	-315									
S10922	405323 722333	22	-85									
S10931	405311 722854	66	-36									
S10941	405506 730345	171	-14									
S10977	405657 723408	12	-38									
S11105	405342 732038	175	-342									
S11241	410122 723842	55	-38									
S11242	410004 723108	37	-53									
S11260	405038 724628	125	-29									
S11261	405839 723612	60	-56									
S11262	404617 732507	110	-65									
S11267	404719 732829	110	8									
S11279	403826 731521	5	-403	-76		-93	-171					
S11428	404236 731323	5	-175	-70			-93					
S11538	404319 731453	12	-108	-61			-77					
S11673	404635 732631	260	62									
S11695	410148 722358	5	-70									

S11737	410330	722753	30	-58				
S11748	410553	722327	20	-47				
S11760	405156	730454	95	0				S35494
S11803	405003	732148	172	-87				
S11810	405845	731205	35	-261				S23631
S11891	405854	731516	70	-258			-49	S83966
S11929	410400	722629	35	-52				
S12015	410151	722741	20	-51				
S12079	404758	732415	141	-384			20	
S12081	405648	730749	70	-9				
S12092	405108	724489	83	-52				
S12130	405126	732736	70	-237				S57354
S12151	410416	722435	10	-51				
S12160	405817	724241	125	-49				S16442
S12163	404821	731856	165	-4				
S12366	405224	732643	160	-184				
S12379	404958	732214	18	-57	-44			
S12383	404942	731002	140	-43				
S12400	410415	722517	20	-52				
S12416	405733	730021	145	-22				
S12420	410131	723134	58	-62				
S12424	404517	730152	22	-34				
S12441	404839	732132	3	-159	-57		-64	
S12457	405158	730454	95	0				S35494
S12465	410420	721959	53	-43				
S12472	404711	730053	40	-55				
S12542	405855	732133	205	-49				
S12556	405943	723521	160	-34				
S12591	405744	721848	110	-9				
S12626	404858	731915	5	-154	-87		-78	
S12782	404942	723723	10	-46				
S12873	404558	731825	82	-386			-38	
S13175	405815	732343	178	-87				
S13192	410822	722106	35	-15				
S13203	405925	721939	3	-47				
S13205	405952	722022	6	-142				
S13248	405302	731538	183	-33				S64862
S13489	405948	723014	15	-50				
S13534	404527	731503	82	-64	-58			S71883
S13537	405954	722842	15	-13				

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL							LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	MONTAUK GREENSAND	MAGOTHY AQUIFER	RARITAN CONFINING UNIT	LLOYD AQUIFER	BEDROCK		
S13568	405605 721906	40	-33									
S13579	404937 732626	175	49				142					
S13591	404600732624	178	-139				73					
S13620	404937 730603	135	-25									
S13640	405922 723626	85	-34									
S13642	404021 731715	90	-5									
S13712	405244 732414	190	-46									
S13854	4039000732034	10	-309	-80		-100	-100				S30114	
S13870	405013 732638	120	-178				67					
S13880	404404 730506	20	-17									
S14150	404352 731343	11	-68									
S14250	404835 730634	110	-27									
S14326	4049200731427	70	-155				-38				S44774	
S14521	405143 732019	200	-352									
S14559	405320 725831	85	4									
S14568	404733 730440	88	27									
S14579	404954 731839	157	-397				-121					
S14588	404920 730534	132	-8									
S14612	405746 725635	100	-48									
S14623	410903 721520	12	-30									
S14675	405113 732606	230	-365					-337			S43081	
S14678	404628 724308	10	-366	-100		-100	-210				S47024	
S14710	404553 725618	30	-88								S67974	
S14750	405559 732324	100	-35				82					
S14759	404916 732150	200	-211									
S14787	405452 724001	20	-195								S15219	
S14776	405459 731634	60	-38									
S14792	405454 730258	165	-288								S46928	
S14825	4045300732622	140	-53				105					
S14828	405113 732606	227	-279								S43081	

S14885	485833	730903	110	86								
S14884	484221	731142	3	-235	-71	PRES	-184					
S14907	485206	723436	170	-18								
S14908	485883	725818	137	-8								
S14921	485819	721009	50	-75								S86733
S14948	484844	732143	3	-188	-68		-75					
S14977	485168	725259	97	-281			-133					
S14987	485186	732246	218	-7								
S15008	483858	730812	5	-474	-110	-158	-263					
S15015	485738	723986	64	-70								
S15037	484839	725858	42	-68								S20705
S15091	410256	720946	45	-124								
S15106	484245	725548	5	-1937	-111	-137	-235	-1279	-1505	-1988		S31112
S15109	485247	732355	218									
S15212	484138	731737	7	-283	-58		-71					
S15219	485452	724608	28	-262								
S15285	484982	730112	65	1								
S15338	485815	731701	158	-28								
S15348	485415	723610	28	-29								
S15366	484917	731953	298	58			100					
S15427	485882	731645	148	3								
S15431	485525	732618	85	-18								
S15432	485528	732705	68	-68								
S15461	485551	732714	80	-28								
S15505	484232	732841	26	-54			-49					S40498
S15514	485388	731751	280	-395			-188					S25776
S15515	485387	731751	288	-156								S25776
S15528	484829	725448	15	-28								
S15532	485242	730739	128	-78								
S15539	484558	730835	28	-295	-95	-122	-185					
S15554	485527	732636	88	-43								
S15551	485415	725981	98	-16								
S15581	484841	731358	115	-4								
S15775	484384	731635	25	-288			-98					
S15776	485113	732688	238	-274								S43881
S15795	410729	722188	42	-39								
S15889	484724	731858	188	-53								
S15863	485115	732859	228	-2								
S15981	484184	730922	18	-398	-148		-158					S27448
S15982	410889	722788	52	-11								

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WELL IDENT-ICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL							LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARD-INERS CLAY	JAMECO GRAVEL	MON GREEN SAND	MAGOTHY AQUIFER	RARIT CONF UNIT	LLOYD AQUIFER	BED-ROCK		
S15914	404620 732847	85	-39				-83				S33006	
S15923	405144 731554	140	-124									
S15949	405238 725251	88	-144									
S15960	405232 725317	75	-148									
S15961	405233 725323	78	-148									
S15982	405687 730724	84	-48								S70767	
S15977	403937 732346	4	-158	-51		PRES	-128				S66138	
S16078	404829 732534	220	30				76					
S16124	404947 730426	138	-34								S60127	
S16129	405302 731536	160	-390				-227				S64062	
S16135	404902 730649	111	1								S64089	
S16137	405027 732503	160	-444									
S16176	404528 731505	62	-55								S71083	
S16256	404402 731930	41	-809				-51				S28635	
S16273	403826 731040	5	-411	-166		-130	-275					
S16309	405238 730306	101	-150									
S16329	405155 732139	235	-58									
S16396	403859730753	18	-467	-185		-152	-262					
S16442	405909 724241	125	-38									
S16443	405629 722539	18	-48									
S16526	404707 732521	120	-181				35					
S16585	405615 732338	125	17									
S16681	404948 731923	188	39									
S16684	404849 731929	218	27				81					
S16685	404824 732635	268	3				228					
S16812	405338 730738	146	-97								S35446	
S16865	404628 724308	18	-485	-188		-198	-228				S47624	
S16888	405918 721743	15	-131									
S16898	410345 721933	35	-22								S51178	
S16700	404331 731929	38	-28									

S16714	405242	724117	288	-44				S85321
S16756	405843	723529	60	-6				
S16757	405881	723454	40	-11				
S16760	410045	723237	67	-15				
S16761	405936	723958	27	-24				
S16763	410164	723143	57	-14				
S16764	410192	723031	38	-25				
S16777	410225	722837	37	-29				
S16787	410858	721715	43	-1				
S16892	404947	724858	45	-31				
S16893	404945	724142	45	-24				
S16936	4043648732525		75	-136			-38	
S17037	404952	725836	90	-65				S19488
S17128	411643	721210	16	-45				
S17131	411111	721119	65	-31				
S17135	411053	721140	36	-20				
S17137	411038	721149	16	-26				
S17181	4043488730934		1	-313	-108	PRES	-129	
S17215	405020	723715	25	-36				S17553
S17438	405221	730329	90	-155				S21979
S17553	405023	723715	25	-36				
S17630	404933	730003	135	-43				S84889
S17631	403806	732919	12	-314	-68	PRES	-88	
S17668	404937	725500	50	-19				
S17689	405454	730300	165	-375			-51	S46926
S17705	404856	724341	10	-375	-104		-182	
S17835	410035	723335	60	-41				
S17903	405753	730145	10	-510				
S18003	4042328732941		26	-645			-50	S48498
S18050	404952	732115	265	-441			30	
S18075	4047878731905		110	-517			-155	S18621
S18075	404787	731905	110	-517			-155	
S18129	404843	725506	40	-40				
S18261	404787	731904	110	-278			-156	S18621
S18473	4050000730723		65	-595			-490	
S18488	404653	725118	32	-361	-84	-123	-188	
S18528	404355	725202	15	-412	-104	-133	-237	
S18566	404528	731505	52	-681			-51	S71883
S18621	404787	731904	110	-91				
S18729	404600	725210	23	-332	-89	-115	-217	S52943

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,148 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL							LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	MONTAUK GREENSAND	MAGOTHY AQUIFER	RARITAN CONFINING UNIT	LLOYD AQUIFER	BEDROCK		
S18795	405931 720823	10	-45									
S18822	404800 724154	15	-30									
S18846	404002 730329	15	-534	-111		PRES	-325					
S19848	404304 731617	25	-710				-51				S42762	
S19857	405840 731758	150	-531				PRES					
S19123	404430 730939	20	-169	-86			-122					
S19190	405350 732758	115	-607					-260	-336		S21119	
S19317	403942 730501	3	-481	-114		-142	-341					
S19395	404907 731050	139	-20									
S19408	404363 725936	92	-74									
S19485	410400 715239	50	-113									
S19488	410340 715245	48	-116									
S19490	410330 715205	31	-132									
S19564	404235 732256	41	-64	-54			-64				S20480	
S19584	405455 730720	140	-494				-7				S29704	
S19585	404551 731043	44	-75	-66			-69					
S19670	404440 731050	25	-85									
S19684	404000 731133	95	-62								S51519	
S19787	405500 731001	15	-13									
S19804	405130 730710	80	-223								S19885	
S19885	405129 730719	72	-223									
S19961	404932 724035	67	-83									
S19985	404225 731012	25	-21									
S19998	410035 721023	20	-24									
S20098	405500 722359	100	-26									
S20041	404444 732511	80	-188				-45				S20042	
S20042	404444 732511	80	-585				-45					
S20057	404520 732241	79	-121								S20300	
S20060	405547 723909	25	-325									
S20071	404455 730041	5	-41									

S20380	4845200732241	75	-157			1					
S20385	4839100731117	10	-438	-101	-121	-207					S39535
S20315	484726 726105	38	-222	-88	-108	-158					
S20318	484733 731631	110	-496			-85					
S20389	4849300731525	120	-192			-20					S58700
S20431	418583 722389	10									
S20460	484236 732250	41	-458	-53		-89					
S20479	484547 731642	45	-83	PRES		-72					S27533
S20530	485250 732032	280	-435				-388				S33970
S20560	410110 720953	20	-23								
S20566	4843400731541	28	-749			-48					
S20591	485257 730459	105	-45								S43117
S20601	484839 732328	155	-309			73					
S20633	485212 724726	50	-10								
S20635	4844920731932	41	-863			-49					
S20689	485847 731294	48	-550			-278					S23631
S20785	484639 726857	42	-58								
S20839	485713 726714	110	-81								
S20900	484837 726952	85	7								
S20908	485553 721535	30	-32								
S20924	4838270731815	10	-475	-106	-126	-221					
S20930	484723 730688	90	-50								
S20955	484508732123	22	-600			-48					S31038
S21009	4840000731209	45	-387			-90					
S21079	485221 730329	98	-152								
S21088	483727 731547	10	-1105	-86	-92	-214					S21091
S21091	483727 731548	10	-2004	-86	-92	-214	-1141	-1404	-1986		
S21095	410227 722327	25	-23								
S21119	485357 732000	115	-858				-258	-349	-687		
S21120	485446 730058	120	-383			-19					S38168
S21121	486134 732357	220	-381								S38785
S21134	485108 731742	100	-387			-385					
S21244	484384 731615	23	-579			-60					S42782
S21247	484717 725956	60	-85								S62022
S21362	4847400732255	158	-487			89					S74284
S21366	484357 731816	45	-425			-59					
S21375	4842220731964	10	-483	-57		-84					
S21484	485612 730055	133	-111								
S21485	485253 730310	115	17								
S21487	484323 732225	43	-662			-47					S46338

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,148 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL							LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	MONTAUK GREENSAND	MAGOTHY AQUIFER	RARITAN CONFINING UNIT	LLOYD AQUIFER	BEDROCK		
S21529	405545 724112	42	-193				-18					
S21632	405451 730050	128	-400								S57748	
S21734	405519 732939	64	-389									
S21788	405050 724933	90	-43									
S21873	404748 725138	60	-48									
S21906	410419 721917	20	-38									
S21944	405837 731027	55	2								S87174	
S21945	405159 730855	123	-627				-188					
S22001	404920 730027	89	-28				8	-556				
S22015	404750 732455	168	-582								S83978	
S22048	405257 732934	298	-312									
S22169	4030140731146	5	-428	-113		-128	-283					
S22171	405127 730709	129	-330				-244					
S22278	4043550732300	80	-124	-48			-50					
S22283	403821 731020	10	-275	-82		PRES	-145					
S22351	4040500732324	21	-537				-59				S78458	
S22362	404959 731656	155	-166				-159				S54473	
S22453	405020 730321	165	-71								S23832	
S22471	404922 731629	165	-218				-62					
S22494	4040170731229	58	-78				-62					
S22508	405050 730329	190	-37									
S22547	405159 730440	95	-11									
S22549	404707 731004	114	-381				-151				S35879	
S22568	405132 730959	110	-148									
S22577	4049020730040	61	-848				-319	-777				
S22648	405020 730319	225	-425				-137				S24883	
S22673	404649 730501	50	-189									
S22683	404836 730340	75	-48								S67874	
S22711	404633 730700	70	-70									
S22785	405252 724035	175	-182									

S22792	485843	725984	140	-38						
S22823	484808	731328	125	-275			-42			
S22871	484753	732443	135	48						
S22889	484099	736305	5	-555	-113	-172	-388			
S22910	4848280731140		125	-621			-122	-745		
S22961	485882	724458	55	-35						
S23045	484582	731822	80	-545			-44			
S23048	484457	731824	60	-388			-45			S36714
S23058	4843460731711		40	-177			-65			S47673
S23059	4845270732412		105	-99			21			
S23132	484758	736219	72	-13						
S23138	485844	722158	90	-106						
S23146	485225	732317	105	-485						
S23183	4849220731220		61	-439			-200			S38491
S23185	485886	736723	90	-445			-68			S70767
S23186	485255	731427	160	-331			-62			
S23252	484954	731148	65	-98						
S23255	486457	736383	165	-321			-38			
S23371	485337	732022	175	-428				-342		
S23438	484841	723935	12	-389	-94	-168	-188			
S23433	484841	723935	15	-388			-183			
S23440	484943	725916	185	-68						
S23445	4846500731642		110	-500			-161			S57008
S23455	4844190731415		30	-51	-51					
S23462	484813	731329	125	-275			-42			
S23505	485584	731936	75	-125						
S23506	485329	736957	180	-68						
S23507	485427	736924	180	-80						
S23522	484888	731913	145	-279						S34832
S23523	484760	732150	190	-260						
S23524	485158	736360	110	-352			-338			
S23531	484886	731881	70	-92						
S23609	485319	736829	125	-359						
S23626	4843350731333		4	-522	-87		-98			
S23631	485847	731267	40	-583			-268			
S23699	485385	732228	70	-115						
S23715	484955	731784	155	-185			-180			
S23733	485618	736123	220	29						
S23822	485759	724458	130	-119						
S23823	4843370732513		70	-337			-32			

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL							LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	MONTAUK GREENSAND	MAGOTHY AQUIFER	RARITAN CONFINING UNIT	LLOYD AQUIFER	BEDROCK		
S23827	405245 725858	90	-60								S23828	
S23828	405244 725850	90	-60									
S23832	404922 731628	165	-240				-51				S25674	
S23848	4044380732113	50	-584				-38					
S23876	404935 724326	30	-70									
S23971	405831 721318	70	-29									
S23997	405050 732145	200	-505				-200	-440				
S23998	405140 732221	220	-446				-249	-383				
S23999	405018 731817	160	-544				-268	-530				
S24047	404901 731804	70	-65									
S24121	405316 725545	85	-9								S34480	
S24545	405251 731427	160	-352				-60					
S24552	403818 731220	5	-505	PRES		-117	-229					
S24663	405026 730318	230	-230				-134					
S24769	404819 731603	139	-719				-33	-699				
S24772	404813 731356	120	-848				-50	-766				
S24775	405248 730705	130	-5									
S24846	4048390731514	90	-427				-58				S31636	
S24848	405231 723129	50	-73									
S24875	405700 721704	55	-23									
S25036	405707 721945	91	-39									
S25257	405959 720857	48	-18									
S25268	405354 725353	90	-28									
S25399	405859 722241	70	-50									
S25511	404407 731547	40	-48									
S25617	404458 731023	64	-377				-41				S36714	
S25674	4044310732115	50	-575				-40					
S25709	410442 722203	5	-5									
S25776	405307 731752	200	-386				-102					
S26059	404521 730637	43	-32									

S26247	486868	732338	170	-269							S36888	
S26490	484506	731317	48	-78							S64847	
S26518	485542	725332	95	-22								
S26535	484343	731541	26	-758			-48					
S26680	485200	730955	123	-280							S37174	
S26881	485246	732523	16	-596				-390	-478			
S27070	485136	732357	209	-351							S38785	
S27147	410067	721411	98	-28								
S27192	485301	731530	167	-307			-229				S84862	
S27224	485428	725384	95	-13								
S27260	4844560736329		26	-581	-95	-115	-158				S28488	
S27259	484617	730355	55	-135			-110				S43518	
S27261	485606	725810	137	-27								
S27448	484184	730922	5	-583	-145	-165	-310					
S27533	484547	731042	45	-655	PRES		-73					
S27739	4846830732148		148	-785			98	-724				
S27784	485337	730734	145	-174			-95				S35446	
S27975	485837	725558	61	-28								
S28035	4846470732442		125	-281			45					
S28055	485855	732892	280	-186								
S28211	484413	732510	75	-581			-55					
S28212	4837670732343		10	-315	PRES		-69					20FT -35
S28306	485911	729949	95	-23								
S28329	485439	730724	150	-50								
S28339	4848190730227		15	-671	-117	-165	-315					
S28383	484942	725511	55	-56								
S28406	485111	723333	30	-48								
S28408	484455	730329	25	-310	-98	-116	-161					
S28503	484318	732010	30	-646			-38				S33005	
S28530	485229	725734	85	-185								
S28584	411627	715858	12	-38								
S28693	485339	730736	147	-454			-98				S35446	
S28758	485343	725414	110	-5								
S28767	484717	725957	60	-79							S62922	
S28889	484418	730922	15	-45								
S28819	484912	730333	125	-139							S68868	
S28888	410142	715827	125	-23								
S28928	485414	722328	38	-72							S31837	
S29034	485854	725512	140	-38								
S29277	485882	731508	115	3								

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL							LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	MONTAUK GREEN SAND	MAGOTHY AQUIFER	RARITAN CONFINING UNIT	LLOYD AQUIFER	BEDROCK		
S29296	405311 722158	20	-30				-41				S36166	
S29411	405448 730061	111	-442				-75					
S29491	404129 732245	25	-474	-58							S68666	
S29492	404912 730332	110	-139									
S29501	405428 724755	45	-16									
S29683	405647 725700	135	-38				-32					
S29704	405459 730729	140	-158				-100				S35448	
S29732	405337 730736	145	-420				-255					
S29743	405856 726639	50	-258									
S29751	405442 725420	75	-33									
S29776	404710 732640	195	-840				83	-547				
S29823	404521 732252	70	-548				14					
S29852	405042 731955	190	-500				-261	-488				
S29896	405457 730712	120	-340				-48					
S29897	405450 730734	140	-134				-56					
S29982	404832 732207	200	-467				-489					
S29981	405851 724513	90	-35									
S30007	404870 732530	101	-491				49					
S30008	405058 732330	105	-383				-225				S38194	
S30008	405855 725902	165	-118									
S30114	403800 732034	18	-317	-100			-133					
S30118	404913 730955	58	-139									
S30193	404524 731605	65	-15									
S30207	410321 715645	125	-52									
S30208	410327 715652	135	-48									
S30230	405124 723537	40	-1584				-135	-915	-1132	-1507	S53593	
S30234	404755 731312	112	-78				-68				S37141	
S30235	404806 732613	280	-60				210					
S30271	405548 724126	26	-1260				-190	-734	-902			
S30298	405806 730723	25	-55									

S30324	405902	725348	50	-73							
S30328	405847	724627	100	-65							
S30343	4046310730357		60	-290			-104				
S30421	4047100732453		125	-145			75				
S30506	4045150732255		75	-548			1				S48191
S30550	4039230730611		6	-581	-118	-134	-334				
S30554	405732	724912	170	-1							
S30724	405731	721315	38	-38							
S30729	405417	731121	100	-249							
S30739	404834	724532	25	-25							
S30925	404849	724948	30	-68							
S30931	405542	731931	10	-75							
S30977	410035	720838	20	-28							
S31023	4045270732446		100	-284			23				
S31037	405411	722330	36	-1179			-154	-922	-1138		
S31038	404156	732123	19	-509			-76				
S31039	405253	732635	82	-708				-318	-443	-688	S71533
S31104	404700	731641	110	-548			-190				S57008
S31112	404245	725548	7	-458	-119	-135	-233				
S31113	4040160730237		7	-581	-125	-160	-345				
S31199	405543	722214	65	-33							
S31216	405305	723703	115	-24							
S31269	405512	730105	130	-199			-94				S34007
S31270	405357	730212	137	-231							S52490
S31471	405326	722635	38	-87							
S31488	410153	720007	150	-34							
S31494	405653	722354	15	-65							
S31582	405714	721917	100	1							
S31624	4047550731316		110	-329			-61				S37141
S31633	410547	722029	42	-22							
S31636	405233	723130	52	-68							
S31653	405838	721143	74	-392			-268				
S31711	405143	731100	125	-488			-141				
S31734	405450	730303	183	-958			-49	-619	-716	-958	
S31735	410155	715835	173	-352			-219				
S31737	405531	722536	12	-28							
S31787	410205	720955	30	-39							
S31814	405533	731855	5	-104							
S31815	405531	731842	5	-143							
S31861	405937	720321	10	-20							

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,148 WELLS ON LONG ISLAND, NEW YORK

WELL IDENT-ICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL							LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARD-INERS CLAY	JAMECO GRAVEL	MON GREEN SAND	MAGOTHY AQUIFER	RARIT CONF UNIT	LLOYD AQUIFER	BED-ROCK		
S31867	404845 730401	100	-98				-101				S43516	
S31913	404617 730355	54	-109									
S31925	405845 724920	100	-22								S56900	
S31976	405936 723542	45	-67									
S32014	404320 730535	5	-41									
S32016	405413 732049	150	-658					-396	-476			BDRCK)-655
S32125	405738 725159	50	-26									
S32180	405511 730107	132	-209				-96				S34887	
S32204	405848 721252	95	-33									
S32219	403843 730917	10	-380	-95		-125	-283					
S32309	405711 730020	69	-39									
S32325	405356 730210	142	-212								S52490	
S32326	405357 730211	135	-25								S52490	
S32359	404900 724731	65	-1252				-161	-1083				
S32390	410656 723026	36	-514				-358					
S32412	4047300731532	110	-790				-87	-743				
S32488	405550 724510	80	-83									
S32501	4040470732523	26	-806	-54			-71				S47887	
S32551	405031 730321	170	-75								S54473	
S32552	405030 730321	170	-75									
S32553	410220 720840	10	-38									
S32555	410012 721051	30	-38									
S32575	405341 725313	80	-20									
S32821	405815 730516	75	-527				-71				S34300	
S32841	4045340732100	61	-587				-13					
S32842	403820 731735	10	-298	-64		PRES	-145					
S32843	410316 715547	12	-38									
S32854	410353 715449	30	-38									
S32883	405849 720900	50	-29									
S32885	405442 731900	95	-170									

S32895	405452	730257	165	-600		-49				S46928
S32913	405753	724855	90	6						
S32980	410515	722000	32	-58						S52084
S33005	4043180732010		33	-648		-40				
S33006	405143	731554	147	-357		-75				
S33060	405157	730740	91	-338						
S33073	405725	723628	45	-655		-310				
S33200	410384	722287	17	-15						
S33203	405149	730750	95	-534						S39187
S33204	405149	730752	96	-422						S39187
S33205	405158	730748	93	-358						S39187
S33206	405154	730801	95	-492						
S33230	4049180732648		240	-120		144				
S33271	410255	715428	18	-22						
S33343	410299	721905	16	-20						
S33379	4049320730559		134	-1446		-310	-868	-1058	-1424	S64689
S33380	404932	730559	134	-716		-299				S64689
S33381	405313	730816	129	-678		-433				
S33382	410458	722102	35	-28						
S33399	405351	730505	140	-6						
S33428	410109	721932	46	-28						
S33430	405925	720908	100	-29						
S33490	404601	725447	15	-35						
S33497	405251	730228	100	19						
S33500	405340	730736	148	-403		-98				
S33595	404800	730805	92	-21						
S33598	410442	721958	48	-31						
S33661	410154	721236	42	-40						
S33684	405313	732206	10	-361						
S33775	410337	722044	25	-335		-205				
S33825	404749	725657	70	-110						S33826
S33826	404739	725656	70	-93						
S33848	405939	721849	7	-23						
S33922	405718	721904	115	-700		-215				
S33970	405258	732033	307	-301						
S33991	404511	731120	35	-668	-69	-93				S42827
S34007	405512	730105	138	-209		-98				
S34015	405319	732337	101	-509			-383	-449		S48719
S34016	405156	730451	95	-617		-335				S35494
S34021	4047030732313		200	-450		-166				

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,148 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL							LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	MONTAUK GREENSAND	MAGOTHY AQUIFER	RARITAN CONFINING UNIT	LLOYD AQUIFER	BEDROCK		
S34822	404857 732104	228	-340									
S34832	404809 731912	150	-291									
S34858	405208 722355	10	-27								S34884	
S34883	404835 732140	288	-536				58					
S34884	404835 732140	288	-432				39					
S34189	404358 732292	53	-858	-39			-72				S65585	
S34158	404953 724608	80	-20									
S34215	404913 730829	95	-3									
S34272	405713 724713	130	-871				-150	-858			S51588	
S34293	410858 721227	50	-38									
S34380	405815 730516	72	-378				-74					
S34381	405812 730518	98	-439				-82				S57979	
S34354	405425 724433	30	-110									
S34398	410883 721117	5	-45				-75					
S34488	405253 731427	153	-446									
S34477	405839 725954	150	-30									
S34629	404981 725815	17	-133									
S34832	405448 721908	17	-31									
S34851	405147 730748	94	-323								S39187	
S34852	405148 730755	94	-8									
S34853	405149 730801	100	-800								S39187	
S34855	405824 723908	25	-248									
S34874	405415 722839	15	-45								S47873	
S34733	405144 731057	126	-295				-184					
S34743	405848 724148	85	-1161	-105			-137	-985				
S34839	405809 724587	120										
S34851	405854 731002	78	-14								S34894	
S34892	405519 725749	122	-16									
S34893	405517725749	125	-719				-555	-719				
S34894	405518 725749	123	-622				-547					

S34941	405158	723306	45	-25					
S35005	404459	731237	33	-74					
S35007	404918	732532	232	-469		-148	-436		
S35036	405912	721424	90	-9					
S35063	404427	730732	13	-697		-117			S58630
S35110	405448	724801	55	-381					
S35122	405428	722640	18	-42					
S35136	404918	730722	95	15					
S35270	405409	730614	148	8					S37301
S35365	405338	722140	24	-45					
S35399	404828	731454	140	-26					
S35448	405339	730736	149	-351		-89			
S35469	404818	724656	25	-45					
S35494	405158	730451	95	-346		-335			
S35581	405842	721547	45	-24					
S35669	404840	731751	78	-48		-38			
S35670	404278	732453	45	-127	-33	-53			S49542
S35679	405131	730959	120	-116					
S35788	405954	722827	18	-29					
S35939	405141	731907	171	-362		-299			S53747
S35948	405157	730107	145	-153					
S35948	405428	722025	12	-28					
S36007	405811	721648	48	-19					
S36042	405814	722351	55	-39					
S36166	405448	730651	187	-326		-45			
S36185	405434	731943	48	-288					S56133
S36192	405734	725144	22	-284					
S36318	405328	722441	35	-58					
S36448	410500	722948	35	-63					S36856
S36448	405827	725407	132	-272					
S36459	405409	730614	148	-375		-98			S37301
S36488	404538	731635	78	-535	-49	-54			
S36531	405838	723518	38	-31					
S36600	405819	721845	38	-118					
S36711	405333	725629	81	-144		-83			S49686
S36714	404458	731824	63	-291		-42			
S36791	405846	731615	148	-534		-89			
S36858	410500	722948	32	-22					
S36868	410058	721438	7	-34					
S36961	404817	730829	100	-25					

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,148 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL							LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	MONTAUK GREEN SAND	MAGOTHY AQUIFER	RARITAN CONFINING UNIT	LLOYD AQUIFER	BEDROCK		
S36965	405639 721811	52	-110				-86				S42827	
S37140	404618 731123	35	-295	-89			-88					
S37141	404755 731314	112	-316				-114					
S37144	404753073024	76	-126	-104			-102				S54305	
S37145	404304073061	98	-112	-96								
S37174	405159 730858	123	-186				-118					
S37276	404918 731330	40	-360				-98					
S37301	405409 730611	148	-167				-37					
S37351	405141 731908	171	-492				-293	-461			S53747	
S37494	404717 725956	60	-582				-100				S62022	
S37681	4042320732258	42	-541	-52			-68					
S37847	404932 730603	136	-318				-309				S64609	
S37991	405458 725327	102	-39									
S38035	4047230732453	132	-318				82					
S38192	4045270731503	66	-539	-60			-74				S71083	
S38194	405054 725902	157	-618				-600					
S38320	404756 730255	75	-98								S42761	
S38321	404756 730255	63	-240				-133				S42761	
S38491	404922 731227	61	-342				-209					
S38595	405257 730501	100	-500				-305				S43117	
S38784	405256 730456	105	-498				-300				S43117	
S38785	405136 732357	202	-499									
S38916	405418 730649	227	-618				-27	-563			S40988	
S39184	405147 730804	93	-607								S39187	
S39185	405147 730805	93	-526								S39187	
S39186	405147 730803	93	-590								S39187	
S39187	405147 730804	95	-603									
S39333	405208 731314	64	-594				-422				S40711	
S39347	405054 730509	128	-48								S42760	
S39518	4051180731239	76	-649				PRES	-594			S42473	

S39531	404614	731230	53	-236			-70			
S39535	403819	731117	5	-458		-100	-140			
S39536	405345	732038	173	-442						
S39709	404556	732522	85	-620			3			
S40057	4050100730903		110	-513			-154			S42227
S40161	405335	725629	90	-58						S49606
S40161	405335	725629	80	-58						
S40330	404324	732222	43	-294	-39		-47			
S40331	405221	730212	87	-607			-408			S41050
S40333	405236	731709	110	-415						
S40407	405636	723448	10	-138						
S40497	404600	731746	74	-210			-64			S46830
S40498	404230	732041	24	-724			-60			
S40709	405223	730219	90	-395						
S40710	405207	731314	78	-393						S40711
S40711	405209	731314	78	-283						
S40818	4046100730537		55	-699	-101		-105			
S40837	405510	730453	195	-615			-81	-573		S57980
S40838	405510	730453	195	-99			-81			S57980
S40849	405510	730634	81	20						
S40850	405555	730801	81	6						
S40851	405744	725719	32	1						
S40852	405656	725643	115	18						
S40853	405600	725624	100	29						
S40854	405442	725638	100	21						
S40980	405418	730649	225	-353			-1			
S40981	404928	730735	100	-594			-116			S51609
S41050	405222	730213	89	18						
S41341	404807	725907	73	-638			-127			S71785
S41342	4050210730624		130	-533			-384			
S41343	405217	730116	110	-548			-106			
S41344	4049100731428		79	-814			-47			S44774
S41345	405249	731928	237	-570						S61937
S41358	403817	731633	10	-351	-73	PRES	PRES			
S41513	4051200730824		108	-611			-149			
S42053	405032	731407	58	-683			-56			
S42054	4050430731229		48	-683			-240			
S42225	405015	732352	110	-688						
S42226	405015	730902	110	-160						S42227
S42227	405016	730903	110	-143						

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,148 WELLS ON LONG ISLAND, NEW YORK

WELL IDENT-ICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL							LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARD-INERS CLAY	JAMECO GRAVEL	MON GREEN SAND	MAGOTHY AQUIFER	RARIT CONF UNIT	LLOYD AQUIFER	BED-ROCK		
S42270	405119 731237	76	-573				PRES				S42473	
S42473	405119 731237	76	-573				PRES					
S42504	405215 730115	110	-113									
S42505	405213 720113	110	-113									
S42760	405054 730509	130	-43									
S42761	4047560730255	75	-258				-115					
S42762	4043050731614	26	-688				-84					
S42827	404511 731123	35	-628	-62			-92					
S43001	405113 732609	230	-360					-318				
S43010	404804 724838	20	-680	-76		-94	-144				S40712	
S43088	4046400731521	90	-812				-66	-772				
S43101	4051400730240	40	-663				-118					
S43117	405256 730456	102	-458				-305					
S43516	4046180730356	55	-748				-101					
S43808	404323 732534	66	7									
S43810	404124 732416	30	-46								S66135	
S43811	404530 732411	102	12									
S43813	404158 732258	35	-43									
S43814	404455 732150	60	10									
S43816	404237 732206	40	-40									
S43817	404618 732650	70	14									
S43819	404250 732023	30	-48									
S43820	404649 731840	110	12									
S43822	404302 731855	20	-54				-136				S62240	
S44032	4051470730649	118	-635									
S44137	4044320731513	39	-681	-46			-54				S50546	
S44186	4050040730227	165	-508				-103				S53291	
S44378	405322 732114	27	-440									
S44467	405122 725407	105	-608				-107				S47438	
S44648	405710 725713	155	-50									

S44774	404920	731428	79	-214			-29		
S44775	405407	730009	150	-605				S52451	MAG>-600
S44914	405254	732142	30	5					
S44918	404812	730412	85						
S45053	405330	732424	185	60					
S45207	405132	731814	165	19					
S45208	405005	732337	150	13					
S45210	404943	731745	125	16					
S45212	405356	731920	120	6					
S45220	4043000730852		10	-714	-90	-104	-146		
S45346	405341	730032	126	36					
S45347	4047200731626		130	-513			-35		
S45348	404729	731620	130	-520			PRES		
S45402	405259	731622	100	10					
S45448	404400	731544	38	-3					
S45447	404606	730500	52	-30					
S45594	404920	731509	105	20					
S45610	405322	732114	15	-298					
S45637	404508	730809	13	-69					
S45638	404804	732037	170	-555					
S45639	404804	732049	170	-570			80	S61356	
S45717	404618	731645	93	18					
S45719	404635	731010	28	-56					
S45720	404710	731310	90	9					
S45722	404510	731220	37	-44					
S45724	405253	725419	84	32					
S45808	405201	725442	93	-814			-105		
S45838	405213	725800	92	35					
S45839	4045030731312		40	-688			-105		
S45935	404851	731851	285	-444			-315		
S46105	405521	731005	15	-468					
S46235	404432	731513	39	-874	-48		-75	S50546	
S46281	405237	732505	34	-17					
S46283	404823	732110	275	38					
S46284	404848	730734	110	2					
S46286	404836	731109	120	13					
S46460	405002	730226	180	-93			-84	S53291	
S46509	404317	730859	15	-300	-75	-115	-138		
S46548	405715	725916	71	-13					
S46549	405624	730221	97	-4				S55502	

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,148 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL							LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	MONTAUK GREEN SAND	MAGOTHY AQUIFER	RARITAN CONFINING UNIT	LLOYD AQUIFER	BEDROCK		
S46712	404803 724848	20	-80									
S46713	404804 724941	20	-424	-76		-95	-144					
S46930	404806 731746	76	-579				-60					
S46971	405841 732515	196	-640					-428				
S46911	404920 724845	41	7								S46912	
S46912	404919 724845	42	10									
S46928	405455 730258	166	-488				-35					
S46983	405226 730957	147	14									
S46984	405225 731522	123	9									
S46985	405230 731644	166	14									
S46966	404952 724705	89	3									
S47002	405300 723052	90	-73									
S47024	404620 724308	10	-307	PRES		-190	-220					
S47100	405140 730057	100	41									
S47157	404933 731342	105	80									
S47218	405335 725629	71	-832				-307				S49806	
S47219	405407 730011	144	-64								S52451	
S47222	404200 731630	75	47								S66146	
S47223	404351 730541	55	25								S77700	
S47224	404817 725325	20	-13									
S47225	405218 725611	51	20									
S47227	405240 724914	40	-60									
S47228	405300 724827	40	-61									
S47231	405541 723753	40										
S47233	410348 722729	11	-40									
S47234	410213 722327	7	-20									
S47235	410037 721451	5	-17									
S47236	410158 721330	35	-25									
S47281	405349 724415	140	-135				-90				S47282	
S47282	405349 724415	140	-143				-95					

S47310	405467	730811	135	-9				S52451
S47428	405704	721659	63	-8				
S47436	405124	725408	105	-91				S47438
S47437	405124	725408	105	-74				S47438
S47438	405124	725408	105	-164		-103		
S47439	404739	725627	71	-636		-114		S49818
S47453	404804	730513	100	-343	-88	-102		S54305
S47672	4048100731132		100	-634		-150		S51519
S47673	405142	731058	109	-170				
S47675	405111	730658	88	-10				
S47698	405387	730689	133	29				
S47711	4041190732219		25	-196	-47	-68		
S47718	404941	730654	68	17				
S47741	405211	732507	70	-489				
S47743	404642	730658	35	-65				
S47745	405417	725727	62	38				
S47746	404847	725713	90	6				
S47747	404740	725452	31	-4				
S47748	405638	725147	110	74				
S47750	405004	725154	95					
S47752	404687	725947	23	-77				
S47755	405136	724645	63	5				
S47756	404922	725958	89	28				
S47757	405008	730255	100	22				
S47758	404852	730504	121	19				
S47886	404284	732428	43	-488	PRES	-47		
S47887	404646	732521	26	-622	-56	-64		
S47945	405848	725551	143	1				
S47973	405004	730643	94	4				
S47974	405532	730257	149	-1				
S47975	405850	725953	153	24				
S47976	405685	725915	150	12				
S47977	404711	725150	38	-17				
S48014	405283	730855	124	-219		-109		
S48193	404515	732255	88	-454		1		
S48422	4049480730848		95	-640		-185		
S48423	405689	730213	133	-554				S51953
S48424	404904	725700	102	-708		-100		S52944
S48425	405686	722027	35	-9				
S48426	405748	721900	117	-4				

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,148 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL							LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	MONTAUK GREENSAND	MAGOTHY AQUIFER	RARITAN CONFINING UNIT	LLOYD AQUIFER	BEDROCK		
S48427	405618 721005	38	-14									
S48429	405807 721218	58	-18									
S48430	405501 722155	22	-21									
S48432	405606 722357	52	-11									
S48433	405044 722201	78	-57									
S48434	405227 723523	178	-17									
S48435	405051 723531	178	111									
S48436	405229 724156	112	7									
S48437	405831 721712	85	-7									
S48438	405844 721916	114	32									
S48439	405325 722827	31	-28									
S48441	405349 722348	47	-14									
S48442	404941 724148	44	-11									
S48517	405838 721548	38	-35									
S48518	405650 721452	37	-34									
S48519	410243 715601	98	-2									
S48520	405918 721321	58	-12									
S48521	405940 721047	48	-27									
S48522	405858 720824	28	-72									
S48577	410149 715832	188	71									
S48578	405928 721104	98	58									
S48579	410316 715355	28	-38									
S48580	410124 721032	48	-6									
S48581	405908 723222	68	-16									
S48582	405225 723701	88	-25									
S48583	405139 723858	87	-52									
S48651	405316 730416	188	38									
S48719	405319 732336	181	-248									
S48759	404641 730854	28	-7									
S48948	405121 724908	48	-5									

S48958	405259	738183	100	28				
S49018	404739	725827	71	-445			-118	
S49439	405363	731822	128	-587				
S49477	405088	724089	78	-289			-118	
S49542	404286	732458	45	-515	-29		-53	
S49543	405418	730181	125	-581			-579	S51288
S49686	405335	725829	75	-628			-388	
S50222	405738	726428	100	-112				
S50399	405723	723754	48	-298				
S50502	404937	730830	85	49				
S50548	404432	731513	39	-629	-42		-71	
S50638	404268	730733	28	-223	-92		-186	
S50970	405385	723238	98	-118				
S50971	405456	730298	146	37				
S51169	410349	722222	35	-19				
S51170	410311	722155	18	-33				
S51171	410418	722147	27	-26				
S51173	410518	722123	45	-4				
S51174	410437	722056	45	-16				
S51175	410437	722501	39	-9				
S51177	410318	721921	18	-9				
S51178	410344	721932	28	-19				
S51179	410424	721928	18	-37				
S51180	410452	722002	4	-35				
S51181	410534	721946	49	-13				
S51182	410002	721958	61	-3				
S51183	410334	721727	41	2				
S51184	410147	721841	18	-14				
S51185	410132	721848	18	-23				
S51186	410047	721847	22	-28				
S51214	404218	732502	45	-350	-38		-53	S54588
S51286	405412	730957	124	-469				
S51274	410253	715758	28	-35				
S51275	410212	715744	124	-54				
S51322	405717	723748	33	-167				
S51338	405808	724213	128	-88				
S51461	404119	725935	5	-462	-119	-158	-311	
S51519	404808	731133	100	-388			-145	
S51566	405716	724133	74	-15				
S51567	405653	724225	81	-11				

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,148 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL							LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	MON GREEN SAND	MAGOTHY AQUIFER	RARIT CONF UNIT	LLOYD AQUIFER	BEDROCK		
S51568	405809 723854	65	-5									
S51571	405805 724037	80	-22								S52449	
S51573	405512 723952	25	-65									
S51575	405544 724118	37	3								S73357	
S51576	405559 724252	60	-9									
S51577	405630 724420	80	-15									
S51578	405721 724537	85	-41									
S51579	405842 724630	78	-9									
S51580	405714 724709	80	-55									
S51581	405722 723420	32	-13									
S51582	405853 723539	62	-22								S56076	
S51583	405600 724952	68	17									
S51584	405757 724918	105	-37									
S51586	405642 724919	103	3									
S51587	405809 723709	61	-19									
S51588	405634 723805	38	-22									
S51589	405704 723614	31	-13									
S51591	405410 724706	35	5									
S51592	405349 724941	58	14									
S51609	404920 730734	99	-630				-135					
S51626	405229 725925	83	42									
S51673	404225 731930	25	-753	-56			-59					
S51700	404954 725952	93	38									
S51928	405745 724557	85	-64									
S51953	405807 730213	133	-183									
S52050	410400 722020	44	-384				-297					
S52084	410516 722009	29	-45									
S52162	404357 725157	8	-1687	-108		-144	-277	-1336	-1542			
S52236	404504 732219	80	-18				-18					
S52383	405542 724453	63	-1									

S52434	405426	731216	15	-58					
S52449	405512	723962	58	17					
S52451	405407	730011	133	-58					
S52490	405364	730212	137	-417					
S52886	405518	725854	45	-12					
S52943	404558	725218	23	-287	-89	-115	-217		
S52944	404905	725655	102	-102					
S53274	404758	731227	109	-691			-97		S65766
S53291	405802	730226	186	-85					
S53322	410057	723155	53	-47					
S53323	410762	722216	36	-22					
S53324	410184	723033	42	-28					
S53325	410087	723319	41	-27					
S53326	410229	722957	66	-32					
S53327	410022	722936	24	-28					
S53328	410234	722436	28	-21					
S53329	410148	722816	36	-41					
S53330	410706	722832	15	-37					
S53331	410753	722855	47	-23					
S53332	405843	723243	25	-28					
S53333	405924	723423	51	-23					
S53334	405959	723839	32	-21					
S53335	410384	722827	16	-21					
S53336	410817	723155	18	-24					
S53337	410988	721713	28	-32					
S53338	410412	722813	39	-26					
S53339	404722	730385	58	-748	-122		-148		S66183
S53360	405832	731628	141	-562			-88		
S53361	405133	731559	148	-373			-75		
S53497	404958	730858	98	-83					S53498
S53498	404958	730858	98	-631			-188		
S53522	405238	724388	167	-121			-81		S53851
S53693	405124	723536	47	-114					
S53747	405148	731918	171	-282			-117		
S53851	405238	724388	167	-124			-81		
S54099	405029	730321	178	-533			-138		S54473
S54155	404826	731735	88	-683			-97		
S54162	405359	731828	151	-392					
S54305	404905	730515	188	-213	-78		-98		
S54308	404759	731225	109	-688			-188		S65766

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,148 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL								LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	MONTAUK GREENSAND	MAGOTHY AQUIFER	RARITAN CONFINING UNIT	LLOYD AQUIFER	BEDROCK			
S54377	403938 730525	5	-625			PRES	-329						
S54473	405030 730321	170	-142				-130						
S54478	405906 723528	65	-502				-214						
S54479	405857 723538	65	-402				-214					S55076	
S54568	404210 732502	45	-378	-38			-54						
S54731	403822 731550	8	-742	PRES		PRES	PRES						
S54957	4046180731233	50	-328				-74						
S55028	405332 722420	50	-185				-158					S66825	
S55076	405856 723540	68	-275										
S55094	405122 732327	185	5										
S55502	405024 730221	115	-508										
S55733	404326 731741	38	-195				-97						
S56133	405434 731942	70	-283										
S56423	4044180731718	50	-750				-57					S72917	
S56508	4045420730133	6	-703	-116		-135	-162					S66486	
S56674	404958 730015	107	-72									S83258	
S56900	405935 723548	35	-1069				-285	-684	-808	-1015			
S57008	4046580731842	111	-524				-160						
S57354	405126 732737	50	-207										
S57357	410249 715545	32	-111										
S57488	405548 730053	131	44										
S57666	404604 732458	105	-165										
S57691	405231 730113	81	34										
S57723	404522 730458	38	-769	PRES			-115					S66812	
S57748	405520 732939	82	-336						-282				
S57979	405814 730515	100	-482				-55						
S57980	405510 730452	107	-575				-98	-573					
S58700	4049360731525	132	-291				-16						
S58755	405052 730205	240	-12										
S58761	405342 730307	130	-593										

S58921	410040	720925	48	-27						
S58922	410356	715442	49	-14						
S58923	410401	715702	57	-19						
S58924	405934	720932	110	-29						
S58925	405948	721240	72	-20						
S58956	405556	722512	5	-38						
S58957	405608	722307	189	-14						
S58958	405737	722158	190	-20						
S58959	405816	721628	187	-16						
S58960	405827	721605	164							
S58961	405831	721639	131							
S59012	405840	730134	248	-19						
S59073	405845	730206	248	-19						
S59259	405243	730704	142	42						
S59347	404419	731715	51	-412				-79		S72917
S59711	410123	721303	65	-329						
S59719	405323	725213	63	-87						
S59744	404722	730305	80	-221	-118			-125		S66183
S59793	405615	721823	34	-546				-172		S73990
S59794	405200	722418	8	-145						
S59795	410121	721907	15	-115						
S59992	405642	722400	24	-268				-164		S73993
S60123	405559	721459	12	-318				-155		S73994
S60124	405922	720634	27	-168						
S60125	410330	715638	87	-228				-211		
S60126	410239	720915	23	-156						
S60127	4049478738426		132	-421				-374		
S60177	405857	722137	99	-741				-275		S73998
S60264	405848	720634	245	4						
S60305	405848	730147	245	-46						
S60488	404542	730133	6	-357	-116		-135	-184		
S60775	405223	725202	63	-77						
S60812	4045240738448		38	-450	-85			-115		
S60897	410202	715629	78	-84						
S60996	403828	731005	10	-295	-73		-128	-190		
S61015	410444	722605	48	-183						
S61124	410109	720103	58	-352				-332		
S61168	404936	723145	10	-1025			-121	-251	-1002	
S61356	404804	732049	178	-582				88		
S61664	4044150731148		28	-735	-66			-85		S63618

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,148 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL								
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	MONTAUK GREENSAND	MAGOTHY AQUIFER	RARITAN CONFINING UNIT	LLOYD AQUIFER	BEDROCK	LOCATED NEAR WELL	REMARKS
S61918	405612 730215	133	-102									
S61937	405249 731928	237	-357									
S62022	404717 725056	60	-253									
S62101	405801 721804	74	-212				-134					
S62102	405918 720825	50	-138									
S62240	405147 730548	118	-534				-136					
S62404	405833 725600	55	10									
S62405	405740 730645	38	-17									
S62406	405700 730803	42	-3									
S62407	405804 730000	40	-5									
S62855	405919 721705	85	-86									
S63205	404202 732427	40	-377				-58					
S63256	404950 730615	107	-65									
S63311	405050730507	138	-672				-58				S68498	
S63365	405147 730811	100	-735				-715					
S63426	404638 732511	120	-175									
S63618	404416 731137	20	-533	-83			-92					
S63794	405154 732546	170	-488									
S63968	405053 731509	79	-574				-38					
S63987	404948 725917	110	-694				-138					
S64023	405843 725859	160	-875				-683	-632			S65290	
S64062	405302 731534	169	-478				-228					
S64069	404932 730608	143	-230									
S64047	404505 731320	40	-594				-114					
S64027	405308 732331	95	-526									
S64028	404851 731203	65	-877				-71				S87197	
S65198	4045290731719	69	-55	-39			-48					
S65290	405843 725859	165	-629									
S65321	405243 724117	259	-45									
S65340	404838 730709	70	-734				-282					

S85686	484352	732158	54	-696	PRES		-132	
S85681	485549	725936	144	34				
S85766	484759	731220	100	-696			-110	
S85855	485351	725851	70	46				
S85858	485424	725456	80	17				
S85857	485429	725548	79	-2				
S85859	485453	725881	92	31				S88854
S85960	485503	725928	135	28				
S86132	4848056732417		100	-48			48	
S86133	4843306732441		63	-98			-33	
S86134	4842356732411		50	-100			-44	
S86135	4841246732415		30	-138	-60		-63	
S86136	4839356732350		5	-139	-63	-70	-118	
S86137	4846536732121		100	17			63	
S86138	4844306732156		60	-90	-30		-44	
S86139	4843326732122		45	-107			-41	
S86140	4842056732100		24	-86			-51	
S86141	4840586732025		5	-128	-54		-59	
S86142	4848156731832		150	-53			-21	
S86143	4845486731754		70	-115	-36		-45	
S86144	4844486731841		55	-88	-55		-63	
S86145	4843356731712		40	-135			-60	
S86146	4842816731638		10	-133			-65	
S86147	4842516730959		10	-174	-89	-106	-145	
S86148	4846146731336		80	-87			-53	
S86149	4845246731234		40	-143			-74	
S86150	4844306731233		25	-138	-59		-78	
S86151	4843706731310		5	-145	-78		-100	
S86152	4849806731219		115	-78			-48	
S86153	4846456731053		50	-113			-68	
S86154	4845486731010		30	-123	-79		-92	
S86155	4844476731041		20	-135	-81		-98	
S86156	4843346730955		15	-158	-95	-115	-125	
S86183	484722	730395	71	-472	-139		-159	
S86368	485158	732648	170	-389				
S86496	485059	730609	127	-686			-78	
S86506	485245	725737	83	28				
S86507	485345	725911	100	24				
S86510	485350	730316	138	31				
S86511	485644	730612	185	-17				

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,148 WELLS ON LONG ISLAND, NEW YORK

WELL IDENT-ICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL							LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARD-INERS CLAY	JAMECO GRAVEL	MON GREEN SAND	MAGOTHY AQUIFER	RARIT CONF UNIT	LLOYD AQUIFER	BED-ROCK		
S66656	404308 732431	50	-703				-48					
S66733	405614 721008	45	-562				-505					
S66823	405623 730852	100	-486									
S66825	405333 722417	50	-335				-162					
S66888	405831 722958	5	-309			-124	-239					
S67074	404632 730706	70	-762				-274					
S67081	403816 731230	4	-121	-92		-101						20FT -40
S67082	403751 731330	12	-222	-73		-100	-206					20FT -50
S67083	403722 731659	12	-113	-88		-93						20FT -46
S67084	403826 731823	9	-196	-76		-88	-147					
S67085	403813 732007	7	-116	-73		-83						
S67088	403739 732201	10	-115	-74			-90					
S67087	403657 732421	10	-196	-78		-84	-148					20FT -42
S67088	403648 732627	10	-215	-68		-74	-151					20FT -35
S67197	404652 731203	84	-699				-59					
S67684	405255 730443	103	10									
S67974	404552 725817	30	-768	PRES		-124	-138					
S68854	405454 725903	137	-725				-614					
S68864	405454 725903	135	-716				-591					
S68868	404912 730333	125	-149									
S69386	405431 730736	145	-195				-5					
S70261	410418 715412	70	-358									
S70319	404916 725820	84	-678				-168					
S70334	405109 731636	55	-648				-175					
S70458	404858 732326	46	-715				-119					
S70488	405158 730448	95	-358									
S70767	405607 730724	92	-491				-58					
S71083	404528 731507	84	-736	-62			76					
S71533	405253 732634	88	-295					-265				
S71785	404807 725908	72	-328				-168					

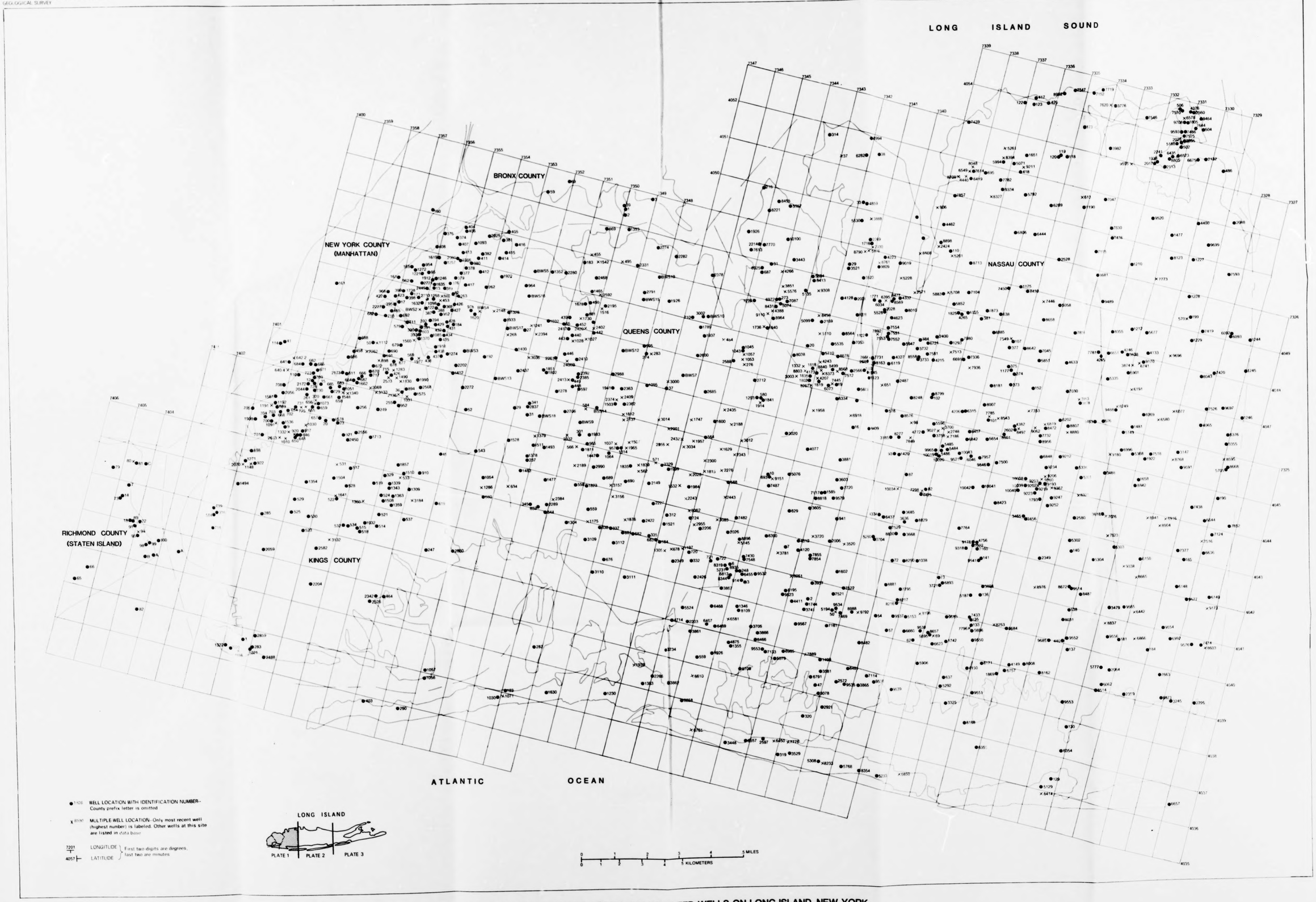
S71891	485898	723845	158	-421			-184			
S72588	484881	732431	158	-595			98			
S72812	484884	725548	35	-175			-128			
S72813	484732	725543	65	-183			-122			
S72814	484659	725522	55	-166	-189		-117			
S72917	484419	731716	58	-462			-78			
S73063	484837	731489	68	-845			-88			
S73278	485641	724318	78	-235			-133			
S73341	484814	730956	65	-751			-295			ALL U.P.
S73357	485589	724252	68	-275						
S73378	485412	722528	64	-376			-186			
S73432	485858	724388	65	-248			-117			
S73588	485827	724248	88	-385			-345			
S73998	485618	721823	34	-511			-176			
S73993	485642	722488	24	-214						
S73994	485888	721588	12	-291			-153			
S73998	485858	722136	98	-784			-276			
S74284	484758	732253	155	-651			187	-597	74285,74288	
S74573	485182	732524	251	-481						
S74585	484849	732812	385	-488			95	-439		
S75834	484433	732449	88	-758			-75	-885	74586,74587	
S75454	484859	731948	225	-838			21	-628	75455,75456	
S76618	484538	731811	65	-792			-45	-755	76817,76818	
S76673	484942	731755	128	-614			-249	-591		
S77818	484748	730945	55	-884			-513			
S77379	485845	729824	43	-311			-187			
S77436	485317	723317	28	-1127			-128	-978		LLYD)-1887
S77788	484351	730541	29	-389	-185	-148	-228			
S77842	484848	730898	68	-449			-482			

86-4318

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

PREPARED IN COOPERATION WITH THE
NASSAU COUNTY DEPARTMENT OF PUBLIC WORKS
SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
SUFFOLK COUNTY WATER AUTHORITY
NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION

WATER-RESOURCES INVESTIGATIONS REPORT 86-4318
PLATE 1



HYDROGEOLOGIC CORRELATIONS FOR SELECTED WELLS ON LONG ISLAND, NEW YORK

By
Herbert T. Buxton, Douglas A. Sroblensky, and Peter K. Shernoff

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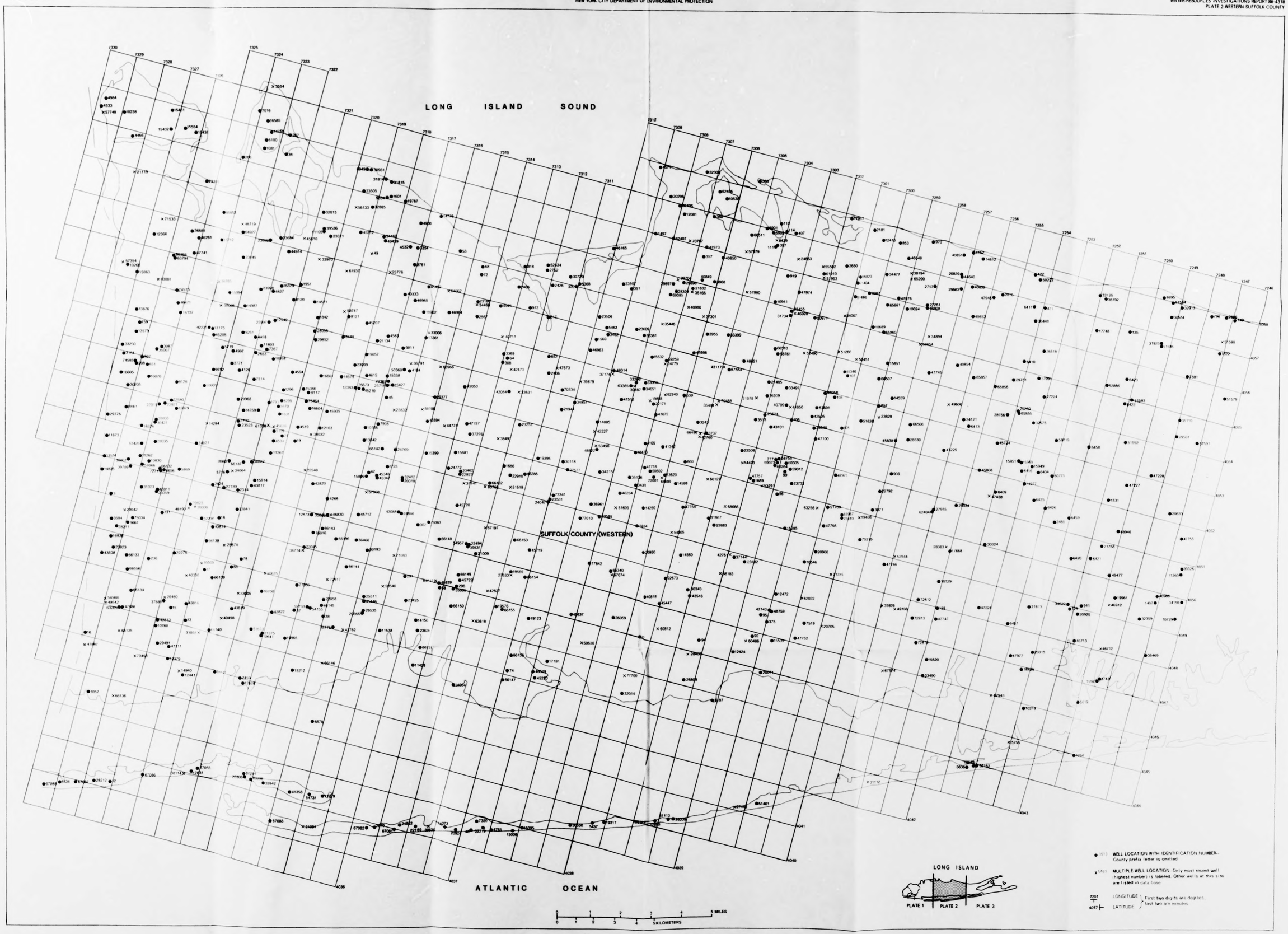
WATER-RESOURCES INVESTIGATIONS REPORT 86-4318
PLATE 2-WESTERN SUFFOLK COUNTY


LONG ISLAND SOUND
SUFFOLK COUNTY (WESTERN)
ATLANTIC OCEAN
0 1 2 3 4 5 MILES
0 1 2 3 4 5 KILOMETERS
LONG ISLAND
PLATE 1
PLATE 2
PLATE 3
WELL LOCATION WITH IDENTIFICATION NUMBER- County prefix letter is omitted
MULTIPLE-WELL LOCATION- Only most recent well (highest number) is labeled. Other wells at this site are listed in data base
7201 LONGITUDE } First two digits are degrees, last two are minutes
4057 LATITUDE }

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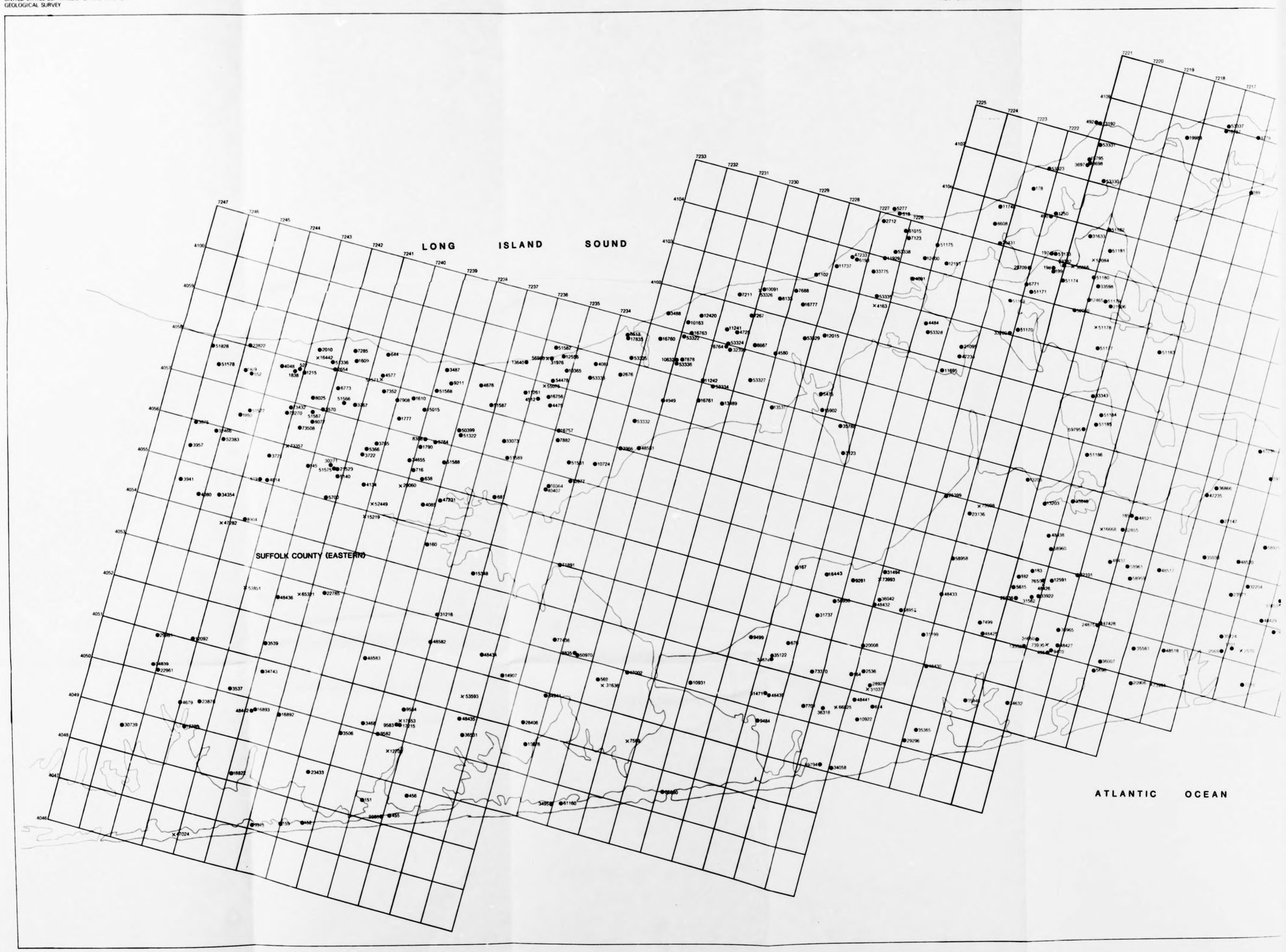

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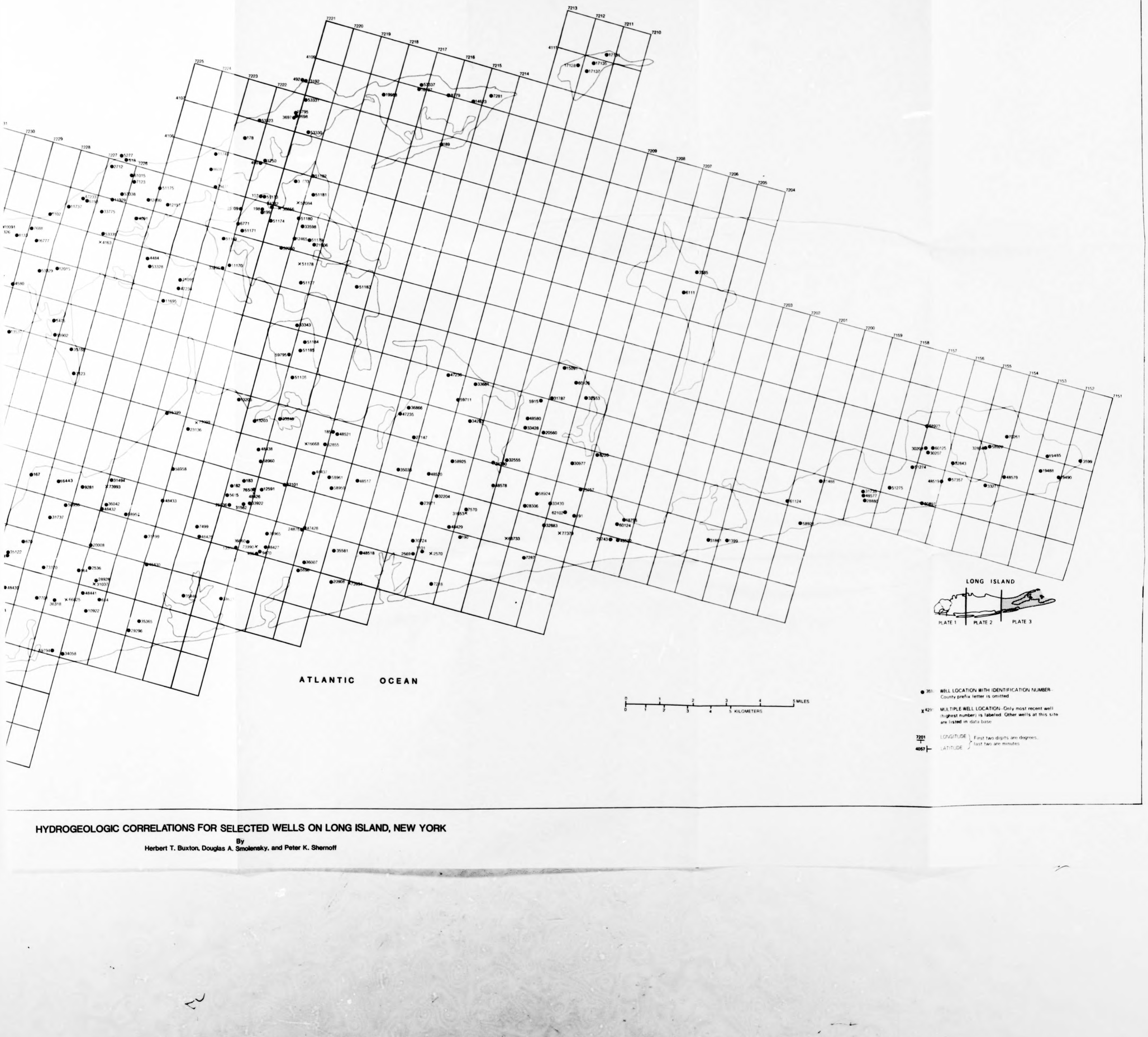
ATLANTIC OCEAN
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